International Institute of Health Management and Research

Report on Dissertation Project

Topic:

Market Assessment for Patient Support Program (Oncology) in India

Name of Organization: Evalueserve

Submitted to	**Submitted by**
B.S.Singh	Isha Porwal
Associate Professor	PG/14/022
IIHMR DELHI	Batch 2014-16

Acknowledgement:

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TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Isha Porwal** student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from International Institute of Health Management Research, New Delhi has undergone internship training at Evalueserve from **14th March 2016** to **14th May 2016.**

The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfilment of the course requirements.

I wish her all success in all his future endeavours.

Dr. A.K. Agarwal
Dean, Academics and Student Affairs
IIHMR, New Delhi

B.S Singh
Associate Professor
IIHMR, New Delhi

Certificate of Approval

The following dissertation titled **"Market Assessment for Patient Support Programs (oncology) in India** at Evalueserve is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation.

Name	Signature
Dr. B.S. Singh	B.S. Singh
Dr Preetha Rai	

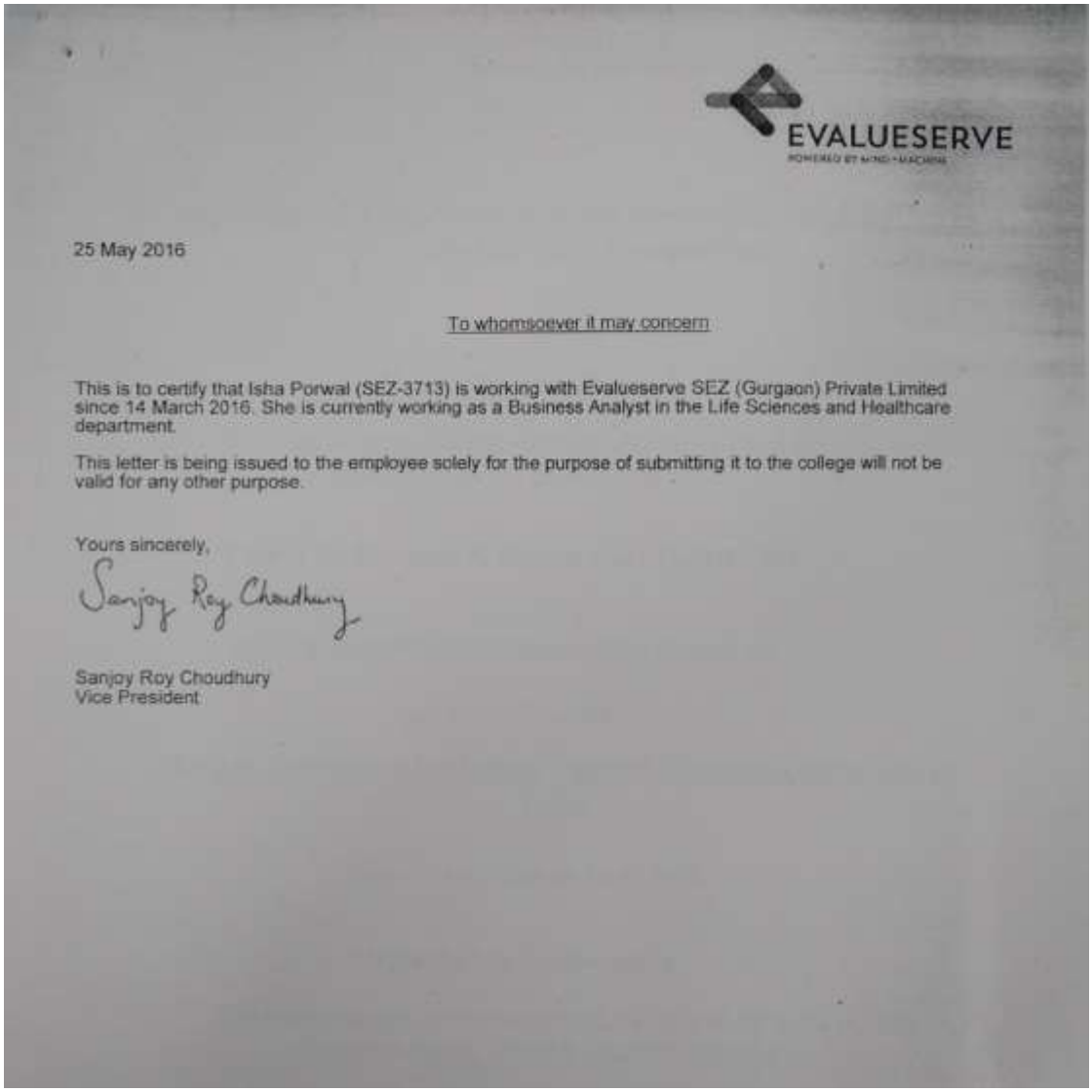
Certificate from Dissertation Advisory Committee

This is to certify that **Isha Porwal**, a graduate student of the **Post- Graduate Diploma in Health and Hospital Management** has worked under our guidance and supervision. He/ She is submitting this dissertation titled at Evalueserve in partial fulfilment of the requirements for the award of the **Post-Graduate Diploma in Health and Hospital Management.**

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

B. S. Singh
Associate Professor
IIHMR, New Delhi

Organization name
Mentor name



EVALUESERVE

25 May 2016

To whomsoever it may concern

This is to certify that Isha Porwal (SEZ-3713) is working with Evalueserve SEZ (Gurgaon) Private Limited since 14 March 2016. She is currently working as a Business Analyst in the Life Sciences and Healthcare department.

This letter is being issued to the employee solely for the purpose of submitting it to the college will not be valid for any other purpose.

Yours sincerely,

Sanjoy Roy Choudhury

Sanjoy Roy Choudhury
Vice President

(Completion of Dissertation from respective organization)

The certificate is awarded to

Name –Dr. Isha Porwal

In recognition of having successfully completed her Internship in the department of

Title- Life Sciences & Health Care (LSHC-02)

and has successfully completed her Project on

Title of the Project-

Market Assessment for Patient Support Program (Oncology) in India

Date – 14-03-2016 to 14-05-2016

Organisation-Evalueserve

She comes across as a committed, sincere & diligent person who has a strong drive & zeal for learning

We wish him/her all the best for future endeavors

Training & Development

Zonal Head-Human Resources

FEEDBACK FORM

Name of the Student: Esha Parwal

Dissertation Organisation: Valueserve

Area of Dissertation: Patient Support Program

Attendance: 100 %.

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Deliverables: Ward report

Strengths: Disciplined, Logical & Hard working

Suggestions for Improvement: Time Management

P Bhadarpate Kanwin

Signature of the Officer-in-Charge/ Organisation Mentor (Dissertation)

Date: 19/5/2016

Place: Gurgaon

INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH, NEW DELHI

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **"Market Assessment for Patient Support Programs(oncology) in India at Evalueserve**Enrollment No. **PG/14/022**in the supervision of**B.S. Singh** for award of Postgraduate Diploma in Hospital and Health Management of the Institute carried out during the period from 14thMarch 2016 to 14th May 2016embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

Signature

Introduction of the organization: Evalueserve (mind + machine)

Established in 2000, Evalueserve has grown to become a leading provider of proprietary solutions and specialist services for research, analytics and data management. They have a global team of 3,200 experts dedicated to helping clients and partners meet their goals. With over 500 satisfied clients, their mind+machine™ approach is right for managing and transforming processes in every industry across a whole range of functions. Services offered by Evalueserve are:

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    - Chemicals
- Life Sciences & Healthcare
    - Bio-Pharmaceuticals
    - Medical Products

    - Healthcare
- Information Technology & Communication
    - Telecommunications & Media
    - Hardware & Software
    - The Internet of Things
- Professional Services
    - Consultancy
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    - Taxation, Auditing & Accountancy
- Services Industry
    - Retail
    - Freight & Logistics
    - Utilities
    - Non-Profit Organizations

Abstract:

Cancer incidence is growing at a steady rate in India, with an estimated prevalence of ~1.5–2 million at any given point of time. In 2013 out of 1.2 billion populations, more than 1 million new cases were diagnosed in India. Figures suggest ~0.15 M patients require facilities for diagnosis, treatment and follow up at a given time. Despite a high need, treatment rate is poor mainly due to high cost of treatment/lack of funds, low diagnosis rate due to lack of infrastructure, accessibility (majorly in smaller cities), ineffectiveness of Government and private schemes, patient non-compliance, drop-out due to drug toxicity, cultural barriers and dearth of patient counseling. Cost of treatment is the most significant hurdle, as many patients across socioeconomic strata cannot afford cancer therapies. Realizing this fact that cancer therapies are expensive, hence not affordable to most patients, pharma companies have introduced Patient support Programs (PSPs to improve patients' access to cancer drugs despite their financial constraints.

The aim of this study is to assess the Patient support Programs (oncology) in India using EU5 nations as gold standards.Nine companies (Astellas, Amgen, Abbvie,Novartis, Roche, UCB,Sanofi,Celgene, and Pfizer) were selected. Their funding data in OncologyPSPs was analyzed while comparing investments between India & EU5 countries.

In India, PSPs are executed through Third-Party Organization, which offer ranges of assistance,including free drugs to those below the poverty line (such as 'plus' offers – pay for one and get one free) and discounts. The major programs are – GIPAP(Novartis),Sutent (Pfizer), Sparsh (Dr.Reddy), Aashayein(Sanofi), GSK for

you(GSK), Confidence & Support to Patients(Roche), etc. Further, it was also found that funding in EU5 nations are comparatively higher than India. The funding is less in India, possibly due to lack of awareness & knowledge, poorgovernmental support, and strict guidelines. Also, PSPs are relatively ineffective due to low accessibility for a vast majority of patients. Companies that design such programs restrict the number of inductions or the conditions to enrollment. Hence, although the programs are a great effort to make cancer medicines affordable, eligibility criteria need to be expanded. Some also believed that government-run programs are much more effective in terms of financial assistance.

The increasing demand and high treatment cost will facilitate need of better and accessible Oncology PSPs in the future, as this is the only way to indirectly reduce treatment cost and hence, reduce cancer prevalence.

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Introduction:

Cancer Burden

Global

Cancers in all forms are causing about 12 per cent of deaths throughout the world. In the developed countries cancer is the second leading cause of death accounting for 21%

(2.5 million) of all mortality. In the developing countries cancer ranks third as a cause of death and accounts for 9.5% (3.8 million) of all deaths. Tobacco alcohol, infections and hormones contribute towards occurrence of common cancers all over the world.

India

Cancer incidence is rising at a steady rate in India. It is estimated that there are nearly 1.5–2 million cancer cases at any given point of time. In 2013, more than 1 million new cancer cases were diagnosed in India, which has a population of 1.2 billion people. Over 7 lakh new cases of cancer and 3 lakh deaths occur annually due to cancer. Nearly 15 lakh patients require facilities for diagnosis, treatment and follow up at a given time. Data from National Cancer Registry Programme indicate that the leading sites of cancer are oral cavity, lungs, esophagus and stomach amongst men and cervix, breast and oral cavity amongst women

Mortality Burden

WHO has estimated that 91 per cent of oral cancers in South–East Asia are directly attributable to the use of tobacco and this is the leading cause of oral cavity and lung cancer in India. An estimate shows that the total cancer burden in India for all sites will increase from 7 lakh new cases per year to 14 lakh by 2026. . Cancer has become one of the ten leading causes of death in India. The cancer mortality rate in India is high, at 68% of the annual incidence. Fewer than 30% of Indian patients with cancer survive five years or longer after diagnosis. Even though the incidence of cancer is projected to be marginally higher in females than in males, projections suggest that

deaths due to cancer in males are noticeably higher. The mortality rates for oral and lung cancer in males and cervical and breast cancer in females is over 50%.

Epidemiology

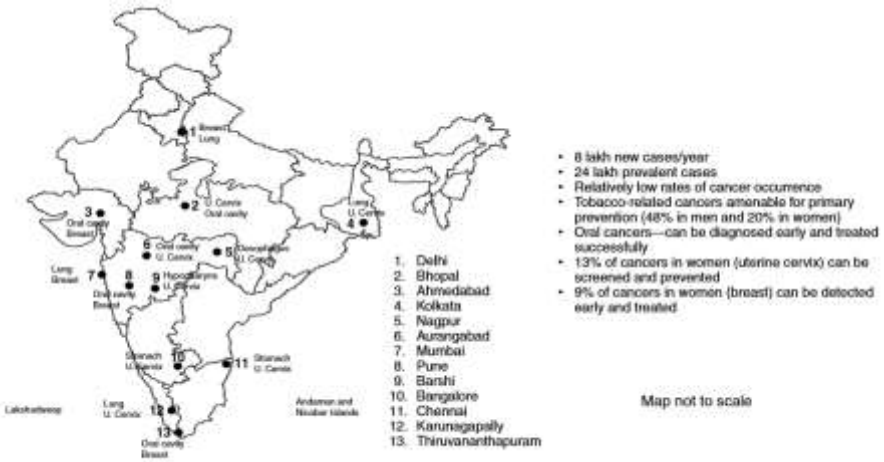


Fig. 1 India: Cancer pattern

Estimate for India -2015

Table 5. Cancer incidence, prevalence and mortality: Estimate for India, 2015

	Male	Female	M+F
Incidence, all ages			
CIR/10^5	66.2	81.6	73.6
ASR/10^5	95.1	112.1	104.2
Cumulative risk (0–74 years)	One in 9	One in 8	One in 9
Incident cases	461,681	536,772	998,453
Prevalent cases	1,154,203	1,341,930	2,496,133
Incidence, 35–64 years			
CIR/10^5	119.5	176.5	153.7
ASR/10^5	155.1	334.3	202.6
Mortality			
CMR/10^5	51.8	46.4	49.1
Deaths	361,474	305,000	666,563

CIR: crude incidence rate; ASR: age standardized rate; CMR: crude mortality rate

Estimated Number of new cases & Deaths due to cancer

FIGURE 1: ESTIMATED NUMBER OF NEW CANCER INCIDENCES ('000)

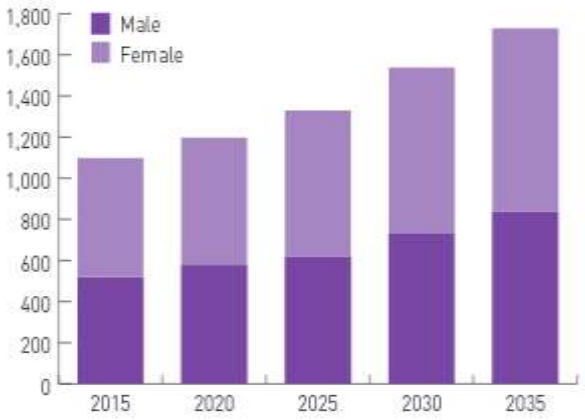
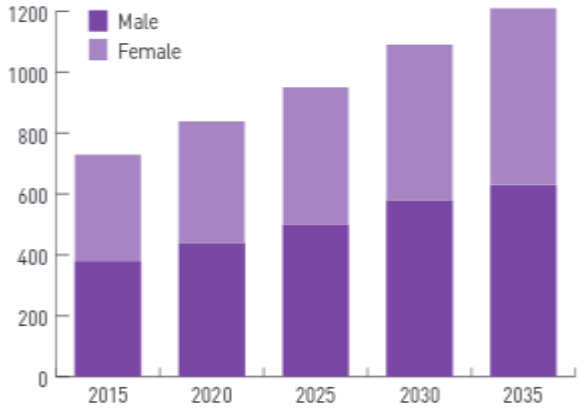


FIGURE 2: ESTIMATED NUMBER OF CANCER DEATHS ('000)



Estimated Incidence cancer cases in India - State wise - All sites- (2011-2014) - Both sexes

Estimated Incidence cancer cases in India - State wise - All sites- (2011-2014) - Both sexes				
States	**2011**	**2012**	**2013**	**2014**
Jammu & Kashmir	10688	11052	11428	11815
Himachal Pradesh	5836	5966	6097	6230
Punjab	23506	24006	24512	25026
Chandigarh	893	915	937	960
Uttaranchal	8633	8899	9173	9455
Haryana	21539	22122	22721	23336
Delhi	14204	14517	14836	15160
Rajasthan	58426	60065	61743	63459
Uttar Pradesh	170013	175404	180945	186638

Bihar	88563	91721	94981	98346
Sikkim	490	513	539	571
Arunachal Pradesh	1108	1134	1160	1187
Nagaland	1579	1595	1612	1630
Manipur	2149	2119	2092	2066
Mizoram	871	885	900	914
Tripura	2944	3036	3141	3259
Meghalaya	2367	2413	2460	2507
Assam	24846	25119	25391	25663
West Bengal	77806	79915	82087	84325
Jharkhand	28135	29067	30026	31012
Odisha	35736	36599	37478	38375
Chattisgarh	21835	22569	23325	24105
Madhya Pradesh	61883	63814	65797	67831
Gujarat	51415	52920	54469	56061
Daman & Diu	209	232	259	288
Dadra & Nagar Haveli	293	310	328	349
Maharashtra	95508	97674	99871	102101
Andhra Pradesh	72395	74900	77543	80334
Karnataka	52099	53476	54886	56330
Goa	1240	1266	1293	1321
Lakshadweep	55	58	60	63
Kerala	28583	29434	30372	31400
Tamil Nadu	61266	62049	62830	63609
Pondicherry	1069	1114	1160	1208
Andaman & Nicobar Islands	321	326	331	335
Total	**1028503**	**1057204**	**1086783**	**1117269**

Source – ICMR, Based on cancer incidence report (2009-2011) and the Report on Time Trends in Cancer incidence Rates (1982-2010).

Estimated Mortality cancer cases in India - State wise - All sites- (2011-2014) - Both sexes

Estimated Mortality cancer cases in India - State wise - All sites- (2011-2014) - Both sexes				
States	**2011**	**2012**	**2013**	**2014**
Jammu & Kashmir	4703	4863	5028	5198
Himachal Pradesh	2568	2625	2683	2741
Punjab	10343	10563	10785	11011
Chandigarh	393	403	413	423
Uttaranchal	3798	3916	4037	4160
Haryana	9477	9734	9998	10268
Delhi	6250	6387	6529	6670

Rajasthan	25707	26429	27168	27922
Uttar Pradesh	74806	77178	79616	82121
Bihar	38968	40357	41792	43272
Sikkim	216	226	237	251
Arunachal Pradesh	487	499	510	522
Nagaland	695	702	709	717
Manipur	946	932	920	909
Mizoram	383	389	396	402
Tripura	1295	1336	1382	1434
Meghalaya	1041	1062	1082	1103
Assam	10932	11052	11172	11292
West Bengal	34235	35163	36118	37103
Jharkhand	12380	12790	13211	13645
Odisha	15724	16103	16490	16885
Chattisgarh	9607	9930	10263	10606
Madhya Pradesh	27229	28078	28951	29846
Gujarat	22623	23285	23966	24667
Daman & Diu	92	102	114	127
Dadra & Nagar Haveli	129	136	144	153
Maharashtra	42023	42976	43943	44924
Andhra Pradesh	31854	32956	34119	35347
Karnataka	22923	23529	24150	24785
Goa	546	557	569	581
Lakshadweep	24	25	27	28
Kerala	12576	12951	13363	13816
Tamil Nadu	26957	27302	27645	27988
Pondicherry	470	490	510	532
Andaman & Nicobar Islands	141	143	145	148
Total	**452541**	**465169**	**478185**	**491597**

Source – ICMR, Based on Cancer incidence cases (2009-2011) report.

Estimated Incidence cancer cases in India - Statewise - (2011-2014) – Males

Estimated Incidence cancer cases in India - Statewise - (2011-2014) - Males

States	2011	2012	2013	2014
Jammu & Kashmir	344	366	390	415
Himachal Pradesh	178	188	197	207
Punjab	751	788	827	868
Chandigarh	30	31	33	35
Uttaranchal	265	282	299	317
Haryana	694	733	775	816

Delhi	460	483	507	531
Rajasthan	1832	1939	2051	2171
Uttar Pradesh	5388	5722	6077	6454
Bihar	2795	2981	3179	3390
Sikkim	6	6	6	7
Arunachal Pradesh	13	13	14	14
Nagaland	19	19	19	19
Manipur	25	24	24	24
Mizoram	10	10	10	10
Tripura	34	35	36	37
Meghalaya	27	28	28	29
Assam	288	291	294	297
West Bengal	2413	2549	2692	2844
Jharkhand	872	927	986	1048
Odisha	1089	1148	1209	1274
Chhattisgarh	661	703	748	796
Madhya Pradesh	1937	2055	2180	2312
Gujarat	1620	1716	1817	1924
Daman & Diu	8	9	11	13
Dadra & Nagar Haveli	10	11	12	13
Maharashtra	2997	3153	3317	3489
Andhra Pradesh	2191	2331	2481	2643
Karnataka	1597	1687	1782	1882
Goa	38	40	42	44
Lakshadweep	2	2	2	2
Kerala	824	872	925	983
Tamil Nadu	1851	1930	2012	2096
Pondicherry	32	34	36	39
Andaman & Nicobar Islands	10	11	11	12
Total	**31311**	**33117**	**35029**	**37055**

Source – ICMR, Based on cancer incidence report (2009-2011) and the Report on Time Trends in Cancer incidence Rates (1982-2010).

Estimated Mortality cancer cases in India- State wise - (2011-2014) - Males

Estimated Mortality cancer cases in India- State wise - (2011-2014) - Males				
States	**2011**	**2012**	**2013**	**2014**
Jammu & Kashmir	144	154	164	174
Himachal Pradesh	75	79	83	87
Punjab	315	331	348	365

Chandigarh	13	13	14	15
Uttaranchal	111	118	125	133
Haryana	292	308	325	343
Delhi	193	203	213	223
Rajasthan	770	814	862	911
Uttar Pradesh	2263	2403	2552	2710
Bihar	1174	1252	1335	1423
Sikkim	2	3	3	3
Arunachal Pradesh	5	6	6	6
Nagaland	8	8	8	8
Manipur	10	10	10	10
Mizoram	4	4	4	4
Tripura	14	15	15	16
Meghalaya	11	12	12	12
Assam	121	122	123	125
West Bengal	1013	1070	1131	1195
Jharkhand	366	390	414	440
Orissa	457	482	508	535
Chattisgarh	278	295	314	334
Madhya Pradesh	813	863	916	971
Gujarat	680	721	763	808
Daman & Diu	3	4	5	5
Dadra & Nagar Haveli	4	5	5	5
Maharashtra	1259	1324	1393	1465
Andhra Pradesh	920	979	1042	1110
Karnataka	671	709	748	791
Goa	16	17	18	19
Lakshadweep	1	1	1	1
Kerala	346	366	388	413
Tamil Nadu	777	811	845	881
Pondicherry	13	14	15	16
Andaman & Nicobar Islands	4	5	5	5
Total	**13146**	**13911**	**14713**	**15562**

Source – ICMR, Based on Cancer incidence cases data (2009-2011) report.

Estimated cancer incidence-

Figure 2: Estimated cancer incidence of females in five cities – 2008

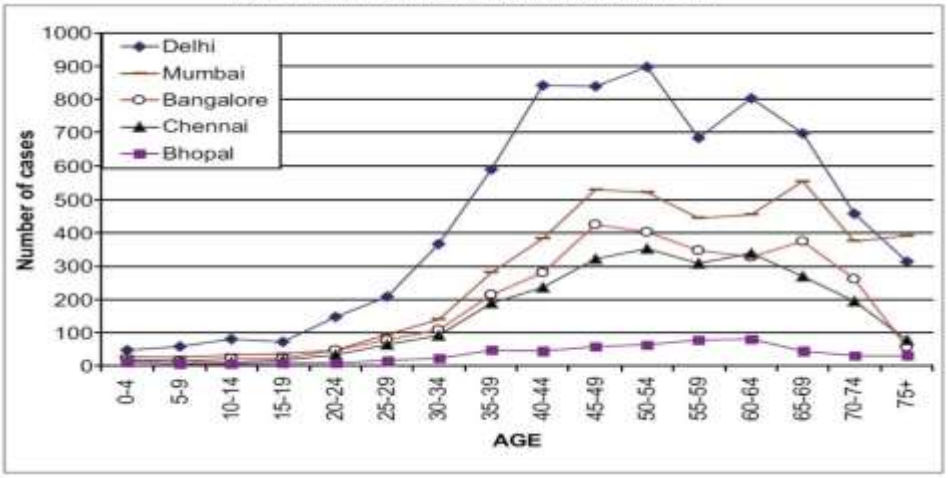
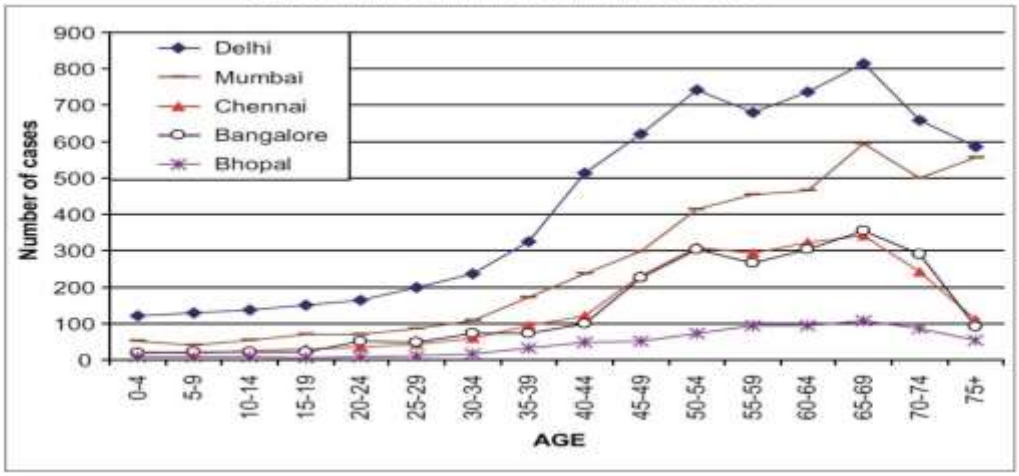


Figure 1: Estimated cancer incidence of males in five cities – 2008



Treatment Paradigm

Treatment facilities are also mostly limited to urban areas of the country. There are no uniform protocols for management and the availability and affordability of cancer treatment shows wide disparities. The majority of patients with cancer present to a

cancer treatment center in late stages of the disease (80% are advanced) and this adds to the already high morbidity, mortality and expenditure.

Some major challenges in treating cancer in India:

- High Cost Of Treatment
- Ineffectiveness Of Government Schemes And Private Schemes
- Patient Non-Compliance And Drop-Out Due To Drug Toxicity, Lack Of Funds And Other Cultural Barriers
- Inability To Diagnose Cancer Early Because Of Lack Of Public Awareness
- Inability To Diagnose Cancer Early Because Of Inadequate Knowledge At The Primary Care Physician Level
- Scarcity Of Infrastructure To Diagnose And Treat In Smaller Cities
- Dearth Of Patient Counselling
- The high cost of treatment is the most significant hurdle to cancer treatment in India. As many patients across socioeconomic strata, cannot afford newer cancer therapies.

FIGURE 3: TOTAL EXPENDITURE FOR CHEMOTHERAPY

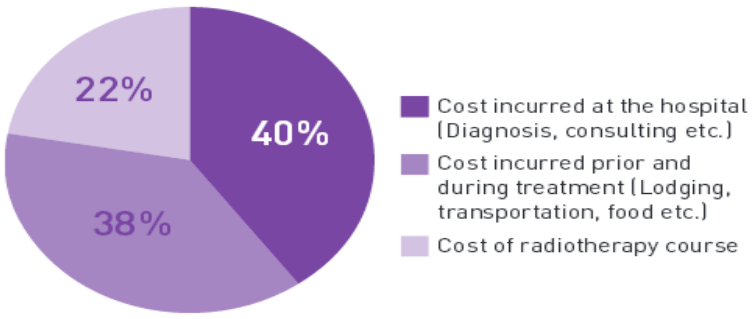
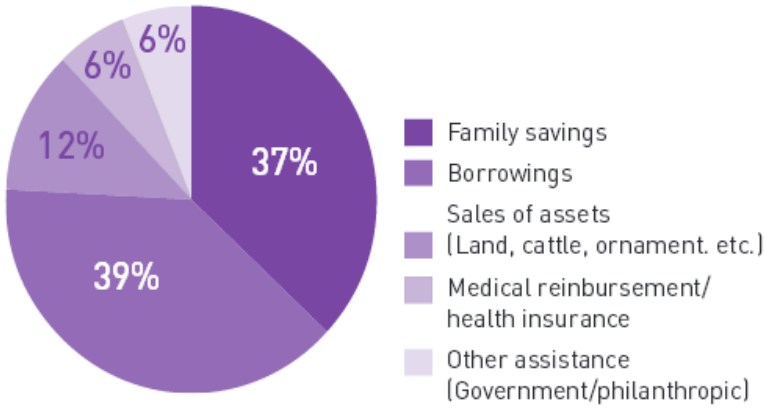


FIGURE 4: MAJOR SOURCE OF EXPENDITURE FOR CANCER TREATMENT (AS OF 2011)



- This cost further increases if the patient presents at an advanced stage. According to data from the India human development survey, the mean monthly household income of citizens residing in urban areas is INR 6,332 (USD93) (INR 75,993 (USD,117) annually) and INR 3,168 (USD46) (INR 38,018 (USD560) annually) among citizens residing in rural areas. This shows that a vast majority of patients with a lower socioeconomic status are unable to afford the cost of treatment. Source of expenditure is yet another area that is worrisome among Indian cancer patients. A meager 6.2% of cancer patients undergoing active treatment are covered by some medical reimbursement or health insurance (government or private).Insurance policies don't assist in treatment because of lack of comprehensive treatment modality. Owing to the financial burden on patients, advanced diagnostic and treatment modalities remain inaccessible to patients and, therefore, leave them ineligible for early detection and treatment.

Patient Compliance:

Oncologists agree that patient compliance is a challenge to cancer treatment. According to oncologists, the trend of cancer treatment will most likely move toward a less toxic form of chemotherapy that will ultimately assist in compliance. Patient compliance affects overall survival rates in a more direct manner. In some cases, it poses an even bigger hindrance to treatment than cost. Poor patient compliance is indicative of patients' being entitled to proper treatment but rejecting them, resulting in complications. It is estimated that 62% and 54% complied with curative and palliative treatment, respectively, in head and neck cancers. Compliance to curative treatment is dependent on duration of treatment, financial status, stage of cancer, age and side effects from the medication.

Patient follow-up is yet another challenge synonymous with lack of compliance. Increasing financial burden, social stigma attached to acceptance of the disease, lack of awareness, belief in alternative medicine and lack of patient counseling post-diagnosis are other factors attached to this inconsistency.

Early diagnosis is driven by two key factors the patient and how he/she is able to reach a primary healthcare facility based on his/her symptoms, and how well physicians are able to relate those symptoms to cancer. The first factor depends on the patient's awareness of cancer. Several NGO's have undertaken efforts to increase the level of awareness among the public, but none have been conducted at a national level. Moreover, nationwide awareness campaigns require government intervention. Awareness of breast and cervical cancer among women has significantly increased, and several oncologists claimed awareness campaigns surrounding these tumors can lead to patients being diagnosed earlier, increasing their chances for survival, especially

compared with lung cancer, which has no associated awareness campaigns. The second factor driving diagnosis is the knowledge base of the onco-pathologists themselves. The lack of trained onco-pathologists can lead to misdiagnosis of early signs of cancer .An immense opportunity exists for web-based awareness tools such as webinars and interactive web sessions that could be utilized to spread awareness among the general public. Active participation by the government, NGO's and pharmaceutical companies could significantly affect the level of awareness and knowledge of patients.

Lack of suitable diagnostic labs:

In India, there is lack of suitable laboratory and trained onco-pathologists, invasive histopathological testing such as biopsy evaluation immunohistochemistry, fluorescence in situ hybridization (fish) and tumor marker tests remain the sole methodology for confirmatory diagnosis. These tests are highly specialized and sensitive, and trained pathologists are required to evaluate the results. Specialized testing requires standardized equipment and facilities, which contribute to increased cost and consequently increase the financial burden on patients. Yet another problem pointed out by oncologists is the reliability of independent private diagnostic firms in conducting biopsies and interpreting their results. Sophisticated testing requires substantial funding and standardized guidelines from central government agencies, which haven't been developed yet.

Patient Counseling:

Patient counseling is necessary but is ignored in the process of cancer treatment. India is primarily a self-pay market, it is the oncologist's responsibility to provide the patient

with an unbiased opinion. However, hospital bias may play a role if patient counseling is done by oncologists. A balance between the emotional side of the patient and scientific discipline is required for an ideal patient counseling support program.

Government schemes and Patient support Programs:

In Patient support Programs (PAP's) are ineffective partly because they have not been able to reach the vast majority of patients. Companies that design such programs restrict the number of inductions or the conditions to enrollment. Hence, although the programs are a great effort to make cancer medicines affordable, eligibility criteria need to be expanded. Some also believed that government-run programs are much more effective in terms of financial assistance. The number of PAP's introduced into the oncology space and the number of patients enrolled have both increased in the past few years, but targeted oncology therapies remain inaccessible to patients in the lower socioeconomic category. Central and state-level governments have introduced several financial aid programs for cancer patients, some of which extend up to INR 1.5 lakh (USD 2,205) per cancer patient. Oncologists specifically praised Rajiv Gandhi yojana's scheme (implemented by the Maharashtra government), which has covered as many as 50 different oncological procedures for over 100,000 patients. However, failure of government schemes to incorporate drugs for targeted therapy presents a major drawback. The pharmaceutical industry has introduced several initiatives in the form of patient and physician outreach programs. The thought leader mentioned that early access programs for patients are currently absent in India due to lack of standardization of guidelines

National Cancer Control Programme

Goals & Objectives

- Primary prevention of cancers by health education regarding hazards of tobacco consumption and necessity of genital hygiene for prevention of cervical cancer.
- Secondary prevention i.e. early detection and diagnosis of cancers, for example, cancer of cervix, breast cancer and of the oro–pharyngeal cancer by screening methods and patients' education on self-examination methods.
- Strengthening of existing cancer treatment facilities, which were inadequate.
- Palliative care in terminal stage cancer.

Existing Schemes under NCCP

(a) Financial Assistance to Voluntary Organizations

This scheme is meant for IEC activities and early detection of cancer. Under the scheme financial assistance up to Rs.5.00 lakh is provided to the registered voluntary organizations recommended by the State government for undertaking health education and early detection activities in cancer. A linkage with the Regional Cancer Centre (or Medical College/Distt. Hospital if there is no RCC) is now mandatory by the NGO concerned.

(b) District Cancer Control Scheme

It is known that a large number of cancer cases can be prevented with suitable health education and early case detection. Accordingly the scheme for district projects regarding prevention, health education, early detection and pain relief measures were started in 1990–91. Under this scheme one time financial assistance of Rs.15.00 lakh is provided to the concerned State Government for each district project selected under the scheme with a provision of Rs.10.00 lakh every year for the remaining four years of the project period. The project is linked with a Regional Cancer Centre or an institution

having good facilities for treatment of cancer patients. The patients are provided treatment at the concerned Regional Cancer Centre or the nodal institution.

(c) Cobalt Therapy Installation

To strengthen the cancer treatment facilities, the financial assistance of Rs. 1.0 crore for charitable organizations and 1.5 crore for government institutions is provided for procurement of tele therapy and brachytherapy equipment's etc. This is one time grant as at present.

(d) Development of Oncology Wings in Govt. Medical College Hospitals

This scheme had been initiated to fill up the geographical gaps in the availability of cancer treatment facilities in the country. Central assistance is provided for purchase of equipment's, which include a tele therapy unit beside other equipment's. The civil works and manpower are to be provided by the concerned State Government/Institution. The quantum of central assistance is Rs.2.00 crore per institution under the scheme. The scheme provides one time grant only.

(e) Regional Cancer Centers

There are 19 Regional Cancer Research and Treatment Centers recognized by Government of India and recurring grant of Rs.75 lakhs is being given to these Regional Cancer Centers.

(f) New Initiatives

There are some activities, which are carried out under the National cancer control programme out of WHO funding under the biennium pattern. In WHO biennium 1998–1999, 16 workshop/training programmes were carried out throughout India. The Pap Smear Kits and Can scan software were supplied to 12 RCC's. Morphine tablets were also supplied to them. In the WHO biennium 2000–2001 following were carried out:

- Outreach activities by medical colleges for early detection and awareness of cancer.
- Training of personnel in early detection and awareness of cancer
- Supply of Morphine.
- Telemedicine and supply of computer hardware and software.
- IEC activities.
- Modified District Cancer Control Programme.
- National Cancer Awareness Day.
- Training of cytopathologists and cytotechnicians in the quality assurance in Pap Smear technology.
- Participation in Health Melas and distribution of health education material.
- Postage stamp depicting a women carrying out 'Self breast examination' was brought out by Deptt of Posts on National Cancer Awareness Day.
- Likely telecast of a health magazine 'Kalyani' in the current year, with cancer and anti tobacco items under the agreement with Prasar Bharti & MOHFW.
- Broadcast of health education audio material developed by CNCI, Kolkatta, through FM Radio.

(g) Modified District Cancer Control Programme

Modified District Cancer Control Programme has been initiated in four states namely Uttar Pradesh, Bihar, Tamil Nadu & West Bengal. Sixty Blocks have been taken and 1200 'NCD workers, 30 supervisor doctors, and consultants have been appointed. This will be a Survey cum health education drive in which about 12 lakh women in the age group 20–65 years are being contacted. Health education about general ailments, cancer prevention and early detection besides 'Self Breast Examination' will be imparted. The project will be completed in about a year's time.

(h) National Cancer Awareness Day

Cancer Awareness day was observed on 7–11–2001. Hon'ble Min. of State, Ministry of Communications Shri Tapan Sikdar at Vigyan Bhawan on the same day, released a commemorative stamp on Cancer and first day cover portraying Madame Curie. A newspaper advertisement on National Cancer Awareness Day was also released in prominent dailies across the country.

Patient support programs: Introduction

Patient support programs are the initiatives taken by the pharmaceuticals company to provide access to the treatment for the patients suffering from cancer who are unable to afford the treatment. PSPs strike a balance between affordability and access for patients. They increase access to cancer therapy; without assistance most patients are unable to buy those drugs. This motivates physicians to recommend the medications for their patients; in return, physicians gain experience with administration and management of these agents and/or regimens. A PSPcan help patients comply with the entire course of treatment as there are no drop-outs due to cost of therapy. This, in turn, ensures good treatment outcomes and a positive perception of brand and product by doctors and patients. By helping patients stick to the therapy prescribed, PSPs can estimate the actual potential of a drug in the market.

Patient support Programs (PSPs) in India

Pharmaceutical companies recognize that cancer therapy is expensive and that most patients who need it cannot afford the full course of treatment. To improve patients 'access to cancer drugs despite their financial constraints, pharma companies have introduced Patient support Programs (PSPs) in India. Assistance ranges from giving free drugs to those below the poverty line to "plus" offers (e.g., pay for one and get one free) and discounts. Oncologists in India believe that PSPs have been successful in India as they deliver the promised benefit to patients. Oncologists surveyed have recommended PSPs to about 60% of their patients, of whom more than 90% have enrolled in a program. The exceptions are those who are unable to afford treatment even with the

assistance. PSPs strike a balance between affordability and access for patients. They increase access to cancer therapy; without assistance most patients are unable to buy those drugs. This motivates physicians to recommend the medications for their patients; in return, physicians gain experience with administration and management of these agents and/or regimens. A PSPcan help patients comply with the entire course of treatment as there are no drop-outs

In 2013, more than 1 million new cancer cases were diagnosed in India, which has a population of 1.2 billion people. About half (53%) were women. In India, the top five cancers found in men, in order of incidence, are: head and neck, lung, gastric, colorectal and esophageal. The top five cancers among women are breast, uterine, head and neck, colorectal and ovarian. The age-standardized rate for cancer in India is 94 per 100,000 people, which is low compared with many developed countries, including China, Japan, South Korea and the U.S. However, the mortality-to-incidence ratio is poor, at 0.7 for both genders. According to "The State of Oncology 2013" report by the International Prevention Research Institute, the global cancer burden has doubled in the last 25 years and is set to double again before 2030. The institute believes that India, China and Nigeria will see the biggest jumps in cancer burden over the next 50 years. According to another estimate, the number of new cancer cases each year in India is expected to increase 10-fold by 2020.The threat of a growing cancer burden is of grave concern to India. The issue is largely an economic one as India's fiscal growth has not translated into better public health; the meager 1.2% of GDP spent on public healthcare leaves much to be desired. Additionally, about 30% of India's population lives below the poverty line. Hence, a large majority of Indian cancer patients – usually the poor and middle class who often don't have health insurance – cannot afford costly treatments.

Pharma companies believe PSPs are critical for India, particularly for targeted therapies. Given the small target patient pool and high cost of drug development, targeted therapies are typically priced higher than other chemotherapy drugs. The cost is often prohibitive for the majority of Indian patients. For example,Herceptin® (trastuzumab, Roche/Genentech/Chugai), indicated for breast cancer, costs about 110,000 Indian rupees (US$1,750) per month, while Sprycel® (dasatinib, Bristol-Myers Squibb), indicated for leukemia, and Erbitux® (cetuximab, Merck Serono), indicated for colorectal cancer, are priced around 100,000 Indian rupees (US$1,600) each. PSPs in India are led largely by multinational companies with targeted therapies, such as Novartis, Bristol-Myers Squibb, Pfizer, GlaxoSmithKline, Merck, Roche and Sanofi. Indian companies like Dr. Reddy's Laboratories and Panacea Biotech also run programs for cancer patients.

Pharma companies run two kinds of assistance programs in India: structured PSPs based on eligibility criteria and unstructured PSPs based on doctor recommendation

Fixed-quantity model: In this type of structured PAP, the number of vials/doses given free is fixed regardless of a patient's financial state. Some pharma companies cap the number of free vials they give to patients in a year. The company also sets the number of payable cycles and the intervals between each free vial based on a financial analysis. This analysis factors in variables such as number of vials recommended, number of doses needed for remission on a monthly basis, the upfront cost to the patient and general compliance to prescribed regimen. For example, the patient buys the first cycle in order for the company to give the patient two free cycles.

Financial model: The patient's ability to pay for the drug determines the assistance he or she can get. Patients have to submit financial documents to verify their economic status. Those who fulfill these criteria are eligible for assistance:

- Patient is not eligible for reimbursement of the drug.
- Patient is not insured for the indication for which the drug is being marketed.
- Patient's annual income is below a certain level.

The annual income ceiling is decided by the pharma company – taking into account the maximum retail price (MRP) of the product – by calculating the cost of the entire treatment of the patient, differential pricing with other therapies and socioeconomic profiling of the target patient pool.

Unstructured Pap's: Unstructured PSPs are based purely on doctor recommendation. The company does not look at the patient's financial status, so the doctor assesses the patient's ability to pay and decides how many vials/doses he or she needs to pay for and how many will be received for free. Unstructured PSPs can include discounts on drug price or free samples that doctors can distribute at their discretion. This type of PSPs usually is conducted through medical representatives

PSPs Are Executed in India through Third-Party Organizations

To maintain patient confidentiality and manage programs without bias, pharma companies

typically employ third-party organizations such as non-governmental organizations (NGOs).

These third parties are tasked with managing the programs, including verifying the diagnosis, cross-checking the prescription against diagnosis, and checking financial documents for patient eligibility and logistical support for the program.

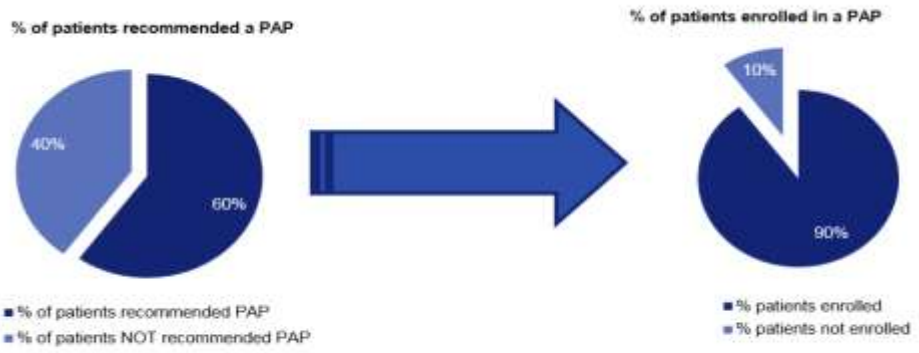


Figure 1: Percentage of patients recommended a PAP and percentage of patients enrolled in a PAP

PSPs involve direct interaction with patients and/or healthcare professionals; their purpose is not to generate safety or efficacy information but to support patient care which is typically done by supplementing and reinforcing care and guidance provided by the patient's HCP or by providing or arranging financial assistance for patients (e.g. reimbursement support, product discount).

Majority of patient support programmes (PSP) fall into one of three categories with the following objectives:

- To support patients and help them take their medications as prescribed (compliance/adherence)
- To help patients understand their condition and provide advice on managing disease e.g. lifestyle (exercise or diet), disease education
- To provide a service or financial assistance or reimbursement support for patients also known as Patient support Programs)
- Patient education to increase disease awareness and improve disease management
- value-add tools and services(Digital media- iPhone apps or SMS text messages, reminders, monitors, wireless health trackers, social media)

- access to nurses or other healthcare professionals via phone or online chat, call guide, educational support and counselling
- Patient Support Programs will continue to play an important role in brands' overall acquisition and retention strategies. However, to increase uptake and usage of these programs, they need to ensure that the patient not only sees a strong value to the program, but that the program also respects their time and commitments as much as possible.
- The advent of automated and wireless health devices are reducing the onus on the patient to manually input important health data, and creating a greater opportunity for patients to see important trends in their health management.

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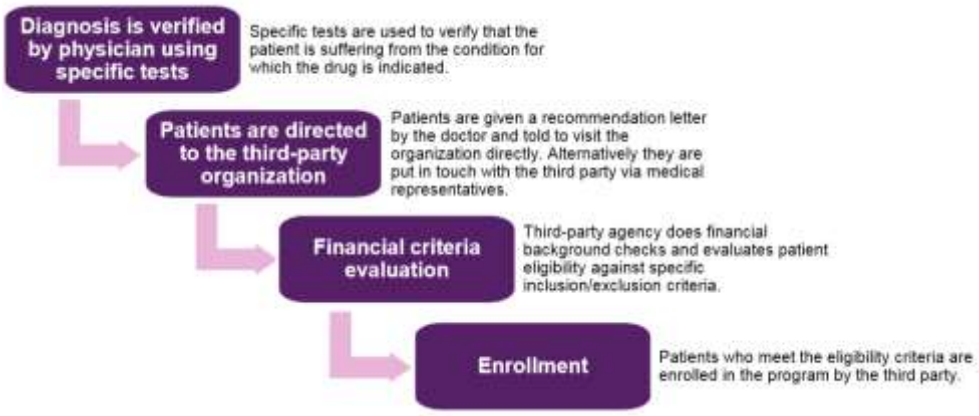


Key Considerations for Setting up PSPs:

- PSPs are designed based on what pharma companies think is the actual price and volume the brand can achieve (if affordability were not a constraint) and return on investment.
- Sustainability is the key consideration when designing a PAP.
- Other considerations include:
    - ✓ Cost-value benefit analysis based on size of the opportunity

- ✓ Type of cancer and patient base – incidence, prevalence and diagnosis
- ✓ Share of patients who are prescribed the brand/drug
- ✓ Share of patients prescribed the drug who cannot afford to pay for it
- ✓ Competing molecules and generics – to understand the impact on pricing
- ✓ Different forms of PSPthat can be offered Structured or unstructured
- ✓ Controls to prevent misuse of the program
- ✓ Cost structures
- ✓ Low upfront cost to motivate patients to continue the therapy (*some PSPs
- ✓ break the treatment cost into monthly installments for patients)

- Program duration: Most PSPs last for one year. However, the spacing of free treatment differs from scheme to scheme.
- Distribution model:Stockists, i.e., third-party wholesale distributors for pharmaceutical companies, or directly through the company
  - ✓ Drug could also be directly sent to patient by a medical representative or stockist staff.
  - ✓ Some PSPs require the patient/caregiver to collect the drug from the stockist.
- Logistical cost: If the product requires refrigeration, it will be more expensive to execute the program.

- Patient education program,Especially for a chronic therapy or disease that is symptom-free, to help patients stay positive and ensure they attend the counseling session

Objective

- Perform exercise for patient support programs in the field of oncology in India & European Market.
- Provide explanation of 1-2 very successful patient support program of pharmaceutical company.
- Detailed analysis of the data collected from secondary research.
- Recommendations

Research Question:

- To study and assess the patient support program (oncology) market in India using EU5 nations as gold standards

Rationale:

Disease burden due to cancer is increasing year by year in India .it is becoming a issue of concern. Morbidity & Mortality continue to rise every year for cancer in India & the main reason behind this is unaffordability & patient drop out due to lengthy & expensive treatment regimes. Patient support programs are the initiatives taken by the pharmaceuticals company to provide assistance to cancer patients in form of free drugs, copayments, cheaper medicines & therapies. This study gives us a clear picture of Patient support programs running in India, key challenges faced by them as compared to the programs running in EU5 nations (UK, France, Italy, Germany, and Spain)

Methodology

Review of literature

What is the Evidence for Pharmaceutical Patient support Programs? A Systematic Review

Tisha M. Felder, PhD, MSW, Nynikka R. Palmer, DrPH, MPH, Lincy S. Lal, PharmD, PhD, and Patricia Dolan Mullen, DrPH

Pharmaceutical Patient support Programs (PSPs) have the potential to improve prescription drug accessibility for eligible patients, but currently there is limited information regarding their effectiveness. In an attempt to provide a systematic description of primary studies on PSPs, we reviewed 33 unique studies from commercial and grey literature (e.g., government publications, conference abstracts) sources: 15 health care outcome evaluations, seven economic evaluations, seven surveys and four miscellaneous studies. Enrollment assistance for PSPs with additional medication services (e.g., counseling) was significantly associated with improved glycemic (standardized mean difference = −0.40, 95% CI = −0.59,−0.20; k=3 one-group, pre-post-test; 1 comparison-group) and lipid (standardized mean difference = −0.52, 95% CI = 0.78,−0.27; k=3 one-group, pre-post-test; 1 comparison group) control. Inadequately designed economic evaluations suggest free PSPmedications offset health care institutions' costs for uncompensated medications and enrollment assistance programs. More rigorous research is needed to establish the clinical and cost-effectiveness of PSPs from a patient and health care institution perspective.

A systematic review of integrative oncology programs

D.M. Seely, ND MSc,*†‡ L.C. Weeks, PhD,* and S. Young, MA*

Objective: This systematic review set out to summarize the research literature describing integrative oncology programs.

Methods: Searches were conducted of 9 electronic databases, relevant journals (hand searched), and conference abstracts, and experts were contacted. Two investigators independently screened titles and abstracts for reports describing examples of programs that combine complementary and conventional cancer care. English-, French-, and German-language articles were included, with no date restriction.

From the articles located, descriptive data were extracted according to 6 concepts: description of article, description of clinic, components of care, administrative structure, process of care, and measurable outcomes used.

Results: Of the 29 programs included, most were situated in the United States (*n* = 12, 41%) and England (*n* = 10, 34%). More than half (*n* = 16, 55%) operate within a hospital, and 7 (24%) are community-based. Clients come through patient self-referral (*n* = 15, 52%) and by referral from conventional health care providers (*n* = 9, 31%) and from cancer agencies (*n* = 7, 24%). In 12 programs (41%), conventional care is provided onsite; 7 programs (24%) collaborate with conventional centres to provide integrative care. Programs are supported financially through donations (*n* = 10, 34%), cancer agencies or hospitals (*n* = 7, 24%), private foundations (*n* = 6, 21%), and public funds (*n* = 3, 10%). Nearly two thirds of the programs maintain a research (*n* = 18, 62%) or evaluation (*n* = 15, 52%) program

Conclusions: The research literature documents a growing number of integrative oncology programs. These programs share a common vision to provide whole-person,

patient-centred care, but each program is unique in terms of its structure and operational model.

Oncology Nurse Navigator Programme - A Narrative Review

Shejila C H , Mamatha S Pai & Donald J Fernandes

Cancer care is complex and often requires multiple health care professionals to work in a coordinated and integrated fashion to deliver most effective care available. A team based approach from surgeons, medical oncologists, radiologists, nurse specialists and social worker is required to ensure quality and continuity in care. Specific nursing roles in cancer services are expanding and evolving. Literature survey was conducted from published journals, text books and online databases (CINAHL, PubMed, ProQuest, Ovid, Medline, and science direct)from januarary2000 to January 2014 by using terms pivot nurse ,oncology nurse, case manager ,nurse navigator ,patient navigator ,oncology nurse navigator along with terms oncology or cancer care. Literature review on nurse navigator programme reveals positive outcomes in various aspects of cancer care, but lack of consensus in study population, intervention settings, outcome measures and methodologies have been noted. Patient navigation using nurses is viewed as an effective strategy to improve standard of oncology care delivered. This review provides evidence that nurse navigator programme can improve specific patient outcomes in cancer care

Perspectives of Quality Care in Cancer Treatment: A Review of the Literature

Lisa M. Hess, PhD and Gerhardt Pohl, PhD

Approximately 1.7 million Americans are diagnosed with cancer annually. There is an increasing demand for high-quality cancer care; however, what constitutes quality care

is not well defined. There remains a gap in our knowledge regarding the current perceptions of what defines quality care.

Objective: To review the current understanding and perspectives of key stakeholders regarding quality cancer care for adult patients with cancer who are receiving chemotherapy-based treatment regimens.

Methods: This systematic qualitative literature review involved a search of MEDLINE and PubMed databases for articles that were published between January 2009 and May 2013 using a predefined search strategy with specific Medical Subject Headings terms encompassing 3 core concepts—cancer, chemotherapy, and quality of healthcare. Articles were eligible to be included if they focused on adult cancers, discussed quality indicators of cancer care or quality of care in the article's body, discussed treating cancer with chemotherapy, were conducted in the United States and with US respondents, and reported data about cancer quality that were obtained directly from stakeholders (eg, patients, caregivers, providers, payers, other healthcare professionals). Thematic analyses were conducted to assess the perspectives and the intersection of quality care issues from each stakeholder group that was identified, including patients, providers, and thought leaders.

Results: The search strategy identified 542 articles that were reviewed for eligibility. Of these articles, 15 were eligible for inclusion in the study and reported perspectives from a total of 4934 participants. Patients with cancer, as well as providers, noted information needs, psychosocial support, responsibility for care, and coordination of care as important aspects of quality care. Providers also reported the importance of equity in cancer care and reimbursement concerns, whereas patients with cancer considered the

timeliness of care an important factor. The perspectives of thought leaders focused on barriers to and facilitators of quality care.

Conclusion: Thematic elements related to cancer quality were relatively consistent between patients and providers; no additional information was found regarding payer perspectives. The perspectives of these groups are important to consider as quality initiatives are being developed.

Methodology steps:

- Data collection through secondary research in the field of oncology related to patient support program using sources like:
  - ✓ Company websites
  - ✓ Patient support web report
  - ✓ Patient support organization
  - ✓ Country specific patient association websites
- Data will be collected under the following headings:
  - ✓ Patient support program name
  - ✓ Pharmaceutical company name
  - ✓ Brief description of the program
  - ✓ Product specific or disease specific
  - ✓ If product specific-name of the product & if disease specific-name of the disease
  - ✓ Countries in which program is active
  - ✓ Stakeholders involved
  - ✓ Program is running Globally or locally

- ✓ Promotional methods used
- ✓ Any other relevant information
- ✓ Source

- Sample size-India & EU5 nations(UK ,Italy ,Spain, France ,Germany)
- Method of data collection: Secondary Research data collection
- Tools - Assessment and Interpretation of the PSP in graphical, tabulator form using Microsoft excel
- Detailed analysis of selected patient support program
- Recommendations

Following information on patient support program will be provided in this study:

- Focus area- Oncology
- Geographical area-India, UK, Germany, Italy ,France, Spain
- Competitor pharmaceutical companies-
  - Novartis
  - UCB
  - Abbvie
  - Amgen
  - Roche
  - Sanofi
  - Astellas
  - Pfizer
  - Celgene

Review of Some PSPs Offered in India and EU5 nations

Glivec PSP– Novartis

GIPAP is the pioneer in PSPs in India and is the most widely publicized assistance program, with a large patient base. Patients are screened based on their ability to pay and are offered different schemes, e.g., pay for three months and get nine months free or pay for two months and get nine months free. According to doctors surveyed, introducing the eligibility criteria has diluted the effect of the program. Max Foundation is the third-party agency that runs the program. Some doctors did not know there is a third-party agency or thought that patients get the drugs from the hospital pharmacy. Nonetheless, doctors thought the GIPAP is well executed and that, despite a large patient base, there is personal interaction with each patient as well as emotional support.

Sutent PSP– Pfizer

Oncologists praised this program for delivering the drugs to patients on time. Initial treatment is given for free, and the duration depends on the longevity of patient. The entire treatment is free for patients who live below the poverty line. Other patients receive free vials if they buy a specific number of vials. According to doctors surveyed, the program had little red-tape. However, this PSPis quite fluid; it changes from patient to patient depending on whether the patient can afford the drugs. V Care is the third-party agency that runs this program, although some doctors said they did not know of the agency's involvement.

Sparsh program – Dr. Reddy's Laboratories

The Sparsh PSPis based on doctor recommendation; they decide who is eligible for assistance. Poor patients get the second vial free after paying for the first one. Patients do not need to produce a bill to prove they have bought the first vial. For patients with better financial standing, the program offers two-plus-one and one-plus-one/three-plus-three options. To ensure the program is not abused, the company follows up with patients after the drugs are delivered. Doctors praised the transparent way the program is run by the Sparsh Foundation.

Other PSPs in India, such as Herceptin/Tarceva (Roche) and Votrient (pazopanib) PSP(GSK), are less well-known, with interviewed doctors saying they do not know who executes these programs on behalf of the pharma company.

Patient Support Program list

India

Patient Support Program name	Company	PSP Design	Product name	Disease name	Brief description
Glivec PAP	Novartis	Disease centric	NA	Oncology	Patients are screened based on their ability to pay and are offered different schemes, e.g., pay for three months and get nine months free or pay for two

					months and get nine months free
Sutent	Pfizer	Disease centric	NA	Oncology	The entire treatment is free for patients who live below the poverty line. Other patients receive free vials if they buy a specific number of vials
Sparsh program	Dr. Reddy's Laboratories	Disease centric	NA	Oncology	Poor patients get the second vial free after paying for the first one. Patients do not need to produce a bill to prove they have bought the first vial. For patients with better financial standing, the program offers two-plus-one and one-plus-one/three-plus-three options. To ensure the program is not abused, the company follows up with patients after the drugs are delivered.
Confidence and support to patients	Roche	Disease centric	NA	Oncology	People living with cancer have a variety of support needs and we recognize them. Patient assistance matters as much as clinical effectiveness and healthcare delivery. Good

					patient assistance is linked to improved patient outcomes and lower costs, and contributes significantly to creating healthcare access in the country
Aashayein	Sanofi	Product Centric	Docetaxel	Oncology	Docetaxel is provided to the patients free of cost who are not able to afford it & clears the eligibility criteria for this program
GSKForYou	GlaxoSmithKline SK	Product Centric	Votrient (pazopanib)	Oncology	GSK for you provides free of cost drugs to the below poverty line population.

EU5 Nations

Patient Support Program name	**Company**	**PSP Design**	**Product name**	**Disease name**	**Brief description**
The Glivec International Patient Assistance Program	Novartis	Product centric	Glivec	CML, GIST	It is a drug donation program. Through this initiative the company donates to patients who are not insured, not reimbursed, cannot pay for the treatment privately and are in countries that have minimal reimbursement capabilities

Every Month Matters	Astellas	Disease centric	NA	Prostate cancer	EVERY MONTH MATTERS aims to unite leading experts in the fields of oncology and urology, patient advocacy groups, patients and families, in order to call for improvements in the approach to advanced prostate cancer care. By combining the knowledge and experiences of those directly involved in prostate cancer care, the goal of EVERY MONTH MATTERS is to define optimal care pathways across and within Europe, and help overcome barriers to access to treatments that can extend survival, while improving or maintaining a good quality of life in patients with advanced prostate cancer
Patient Support Grid	Astellas	Disease centric	NA	Oncology & Immunology	Under this support initiative the company provides funding for specific drugs under a co-pay system. They also organize awareness and communication initiatives

UK

Patient Support Program name	Company	PSP Design	Product name	Disease name	Brief description
The NET Alliance	Novartis	Disease centric	NA	Neuroendocrine tumors	The NET Alliance and Novartis Oncology improve knowledge and management of neuroendocrine tumors, and empowering patients to be more informed advocates. This initiative raises awareness and knowledge of disease, increases the timeliness and accuracy of diagnosis, improve outcomes in patients with metastatic disease. Provides credible information for physicians and patients about the disease and its management
Novartis Oncology Access	Novartis	Disease centric	NA	Oncology	Novartis Oncology Access (NOA) is a sustainable access solution through which Novartis shares the cost of its medicines with government healthcare systems, charities and other payers, or directly with patients without healthcare coverage who are unable to pay for the full cost of their medication.

Myeloma UK	Celgene	Disease centric	NA	Myeloma	Celgene Contribution towards Myeloma UK's support to Patients and their Families living with Multiple Myeloma (£110,000.00)
Euro Pacolon UK	Celgene	Disease centric	NA	Pancreatic cancer	Company's provide grant to support the development of the pancreatic and stomach cancer patient groups (2015 – £5,722.18)
Pancreatic Cancer Action	Celgene	Disease centric	NA	Pancreatic cancer	Support for activities relating to disease awareness and patient/carer support (2014 – £30,000)
Leukemia Care	Celgene	Disease centric	NA	Leukemia	Celgene provides patient helpline called as Leukaemia CARE's patient helpline – £13,000.00. This helpline provides patients with information and support facilities
Home care patient support programme	Pfizer	Disease centric	NA	Oral & Renal Cancer	The company provides a homecare patient support programme to healthcare organisations and healthcare professionals for patients who have been prescribed Pfizer's oral renal oncology medicines in accordance with their marketing authorisation. Within the program

					homecare nursing support is provided.
Pfizer Life	Pfizer	Disease centric	NA	Various diseases	It is a website to raise awareness around multiple indications such as Arthritis, Diabetes, Cancer, Haemophilia etc. The website has separate segments for each disease. It also has videos from dietician, fitness expert and pharmacist to help people better cope with their diagnosis. The website also has a GP who supports people in preparing questionnaire for doctor-patient visits.

Germany

Patient Support Program name	**Company**	**PSP Design**	**Product name**	**Disease name**	**Brief description**
Novartis Oncology Partnerships and collaborations	Novartis	Disease centric	NA	Oncology	The program facilitates contact between different interest groups to reveal the needs of patients and their families. The company shares knowledge and encourage the exchange of ideas within the patient organizations about the

					developments in cancer treatment and the resulting implications for the patient.
Lung cancer molecular test and personalized targeted therapies	Pfizer	Disease centric	NA	Lung cancer	This initiative by Pfizer provides information on the need of molecular testing and the testing procedures for lung cancer
Advanced online community to support cancer patients	Roche	Disease centric	NA	AML, Lung cancer	Pioneering Healthcare is Roche's Portal for people suffering from cancer. It offers information and a community for people with blood cancer, particularly patients with acute myeloid leukemia

Spain

Patient Support Program name	**Company**	**PSP Design**	**Product name**	**Disease name**	**Brief description**
Roche's patient resource for different types of Cancer	Roche	Disease centric	NA	Colon cancer, lymphoma, breast cancer, ovarian cancer, skin cancer, lung	It is a Patient awareness initiative. It provides materials, educational leaflets, guides and documents for various types of cancers (Colon cancer, lymphoma, breast cancer, ovarian cancer,

				cancer and CLL	skin cancer, lung cancer and CLL)
I, here and now: exercise and nutrition in breast cancer	Novartis	Disease centric	NA	Breast Cancer	Initiative has been launched in order to meet the needs of women with localized and advanced breast cancer in terms of exercise and nutrition. To do this, Novartis Oncology, in collaboration with a prestigious group of experts consisting of oncologists, dieticians and exercise, oncology nurses, and patients has developed guides with general information and advice in these two areas.
Psychological Care	Roche	Disease centric	NA	Oncology	Psychological Care for cancer patients, their family and friends. It involves Online, Telephonic and personal assistance from Professionals who deal with Cancer Patients
Let's talk about Skin Cancer and Melanoma	Roche	Disease centric	NA	Skin Cancer	Initiative of GEPAC, providing online awareness resources and organizing informative talks for patients

France

Patient Support Program name	Company	PSP Design	Product name	Disease name	Brief description
Chaine Rose (Pink chain testimony, mutual help and sharing around the cancer)	Roche	Disease centric	NA	Oncology	The website is intended for patient awareness & interaction with physicians. Specifically intended for female cancer patients, their families and their HCPs to share their experience
My Book	Roche	Disease centric	NA	Breast Cancer	It is a Patient assistance and awareness initiative. Helps breast cancer patients with practical information and expert advice on managing breast cancer in daily life
PactOnco	Pfizer	Disease centric	NA	Oncology	PACT Onco is an interactive service designed to help better understand the disease and prepare the various consultations, examinations and treatments against cancer
Information Spaces of Cancer patients	Sanofi	Disease centric	NA	Oncology	It is a Patient awareness initiative and includes interaction with HCPs. Within each of ERI®, the

(Dating spaces and Information or ERI)					cancer patient receives personalized support that allows them to take a more active part in their care and to live better with their illness

Italy

Patient Support Program name	Company	PSP Design	Product name	Disease name	Brief description
Italian Gemini network for BRCA molecular test	Abbvie	Disease centric	NA	Ovarian Cancer	Online platform to improve access to molecular test BRCA with a time saving of about 5-8 months. Faster and more efficient access to BRCA molecular testing

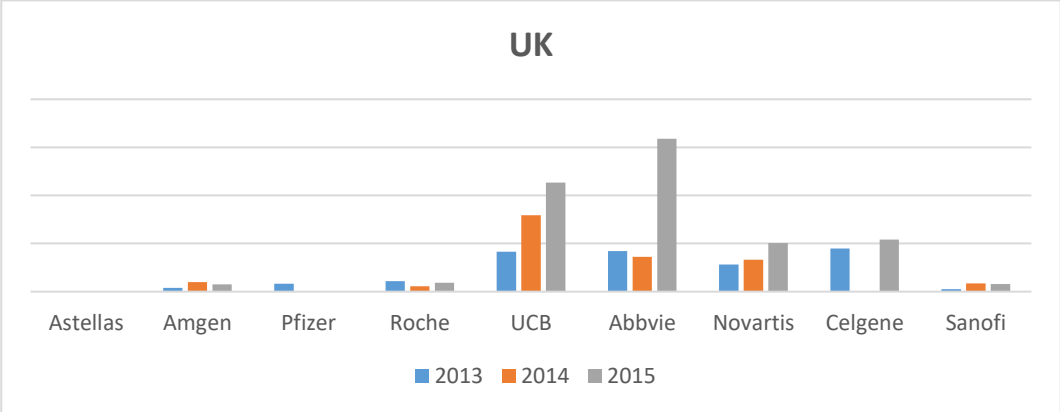
Data analysis and Results

Country wise analysis:

UK

UK			
Astellas	2244.35	2506	
Amgen	15211	40106	29875
Pfizer	32298	728	1116
Roche	43331	22601	36827
UCB	165617	317921	452993
Abbvie	168634	145315	635451
Novartis	112906	132178	202513
Celgene	179099	0	216558
Sanofi	9975	34583	31978

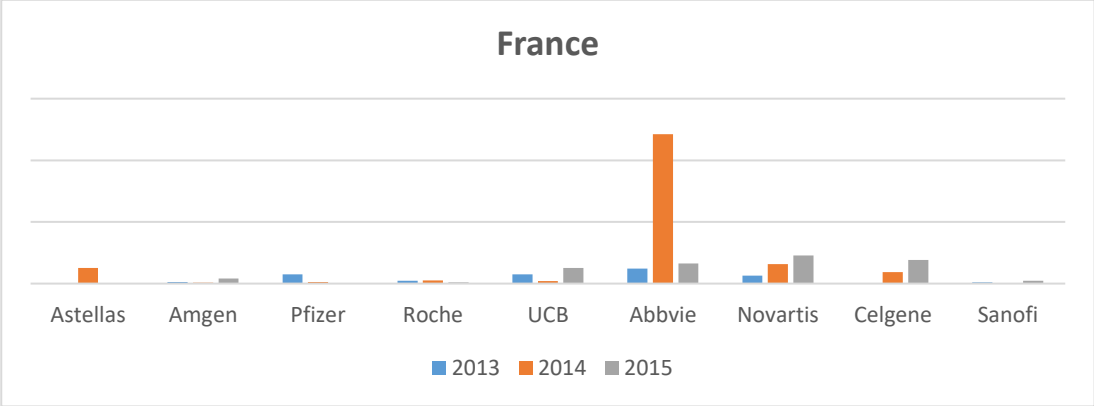
UK



France

France			
Astellas	2349	126230	1116
Amgen	11275	6773	39953
Pfizer	74309	11275	0
Roche	23490	25087	11083
UCB	74309	21328	127157
Abbvie	120334	1211134	162273
Novartis	63889	158939	227942
Celgene	0	92783	192231
Sanofi	10405	0	23238

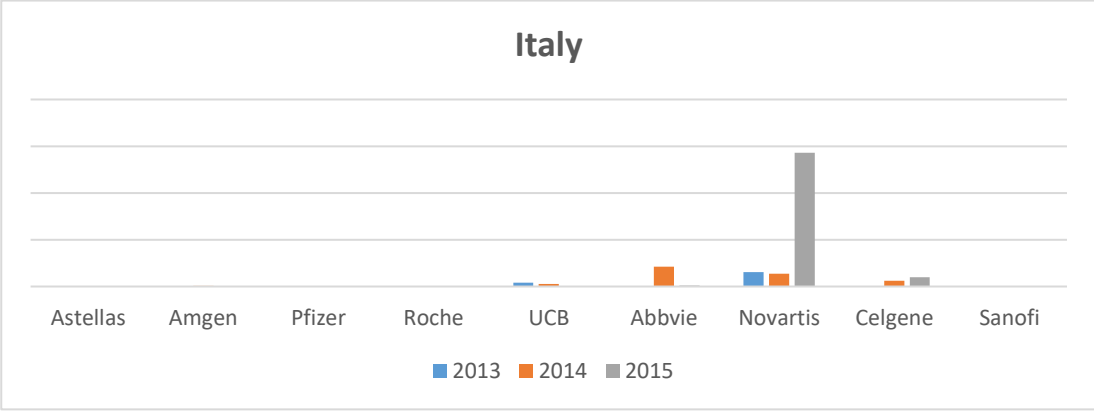
France



Italy

Italy			
Astellas	1761	1693	
Amgen	0	16934	7683
Pfizer	7634	8184	9817
Roche	8808	0	6722
UCB	78703	53012	44
Abbvie	0	425983	20910
Novartis	306195	275415	2858425
Celgene	0	124715	197276
Sanofi	7634	8184	6119

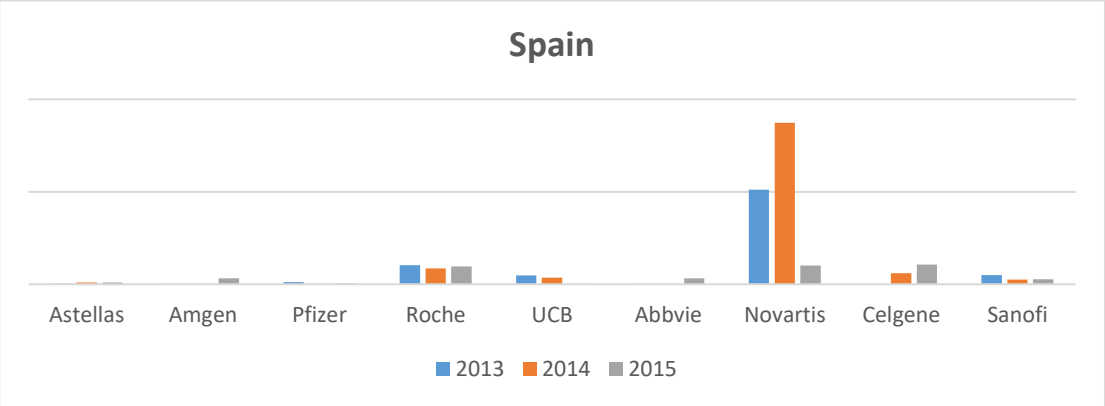
Italy



Spain

Spain			
Astellas	2345	8935	9008
Amgen	237	456	32426
Pfizer	11099	1691	4179
Roche	103350	86303	95379
UCB	48448	34997	768
Abbvie	237	456	32416
Novartis	511114	873365	101365
Celgene	0	59891	105927
Sanofi	48829	24413	27506

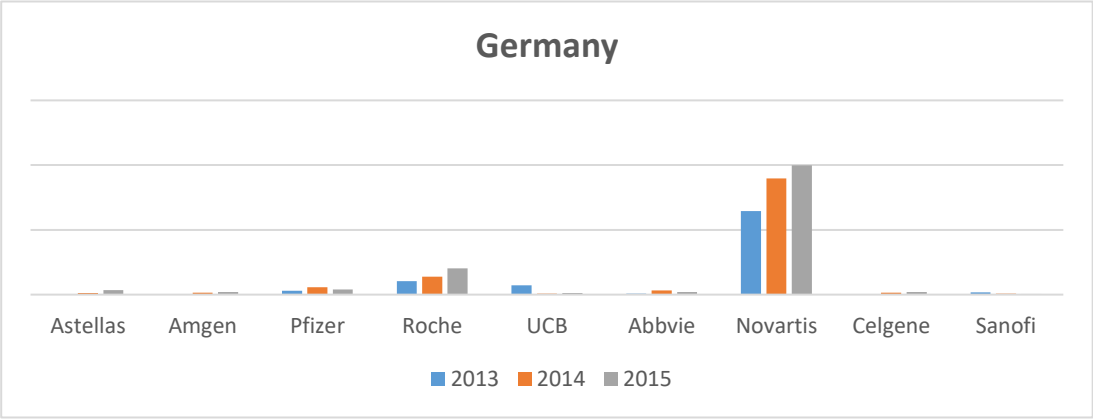
Spain



Germany

Germany			
Astellas	1967	12659	34078
Amgen	0	14560	19050
Pfizer	28790	57689	39806
Roche	103772	137351	201835
UCB	71380	8398	13739
Abbvie	8138	33394	20781
Novartis	644532	896574	998231
Celgene	0	14560	19050
Sanofi	17793	7112	6119

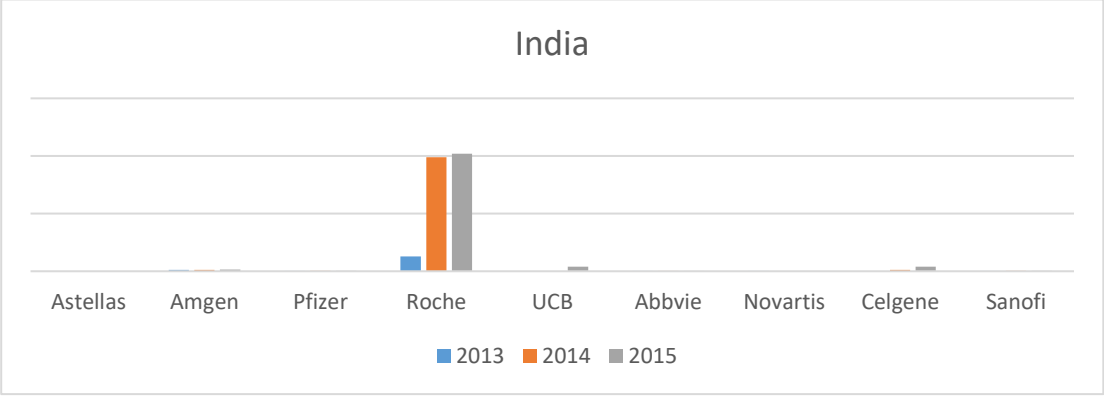
Germany



India

India			
Astellas	0	0	0
Amgen	1284	1298	1369
Pfizer	267	319	378
Roche	12986	98944	101908
UCB	0	0	3904
Abbvie	17	14	11
Novartis	158	0	56
Celgene	0	1145	3841
Sanofi	123	439	467

India

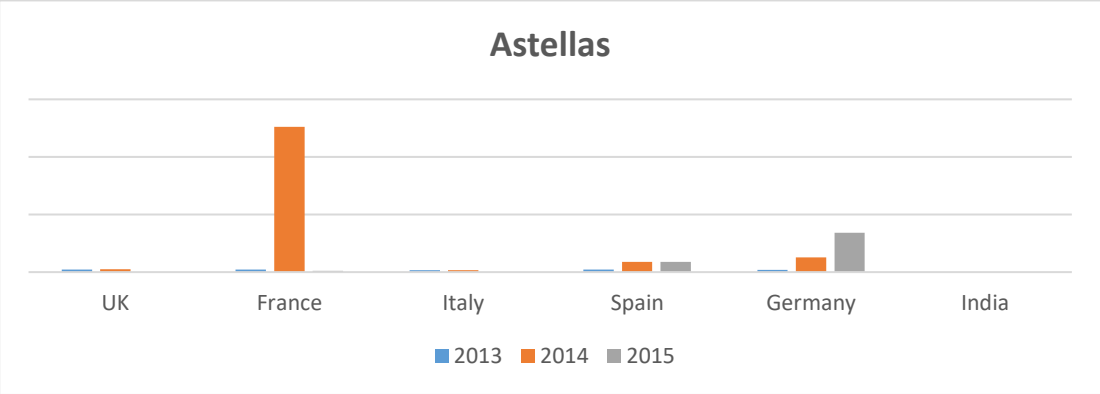


Company wise Analysis

Astellas

Astellas			
	2013	2014	2015
UK	2244.35	2506	
France	2349	126230	1116
Italy	1761	1693	
Spain	2345	8935	9008
Germany	1967	12659	34078
India	0	0	0

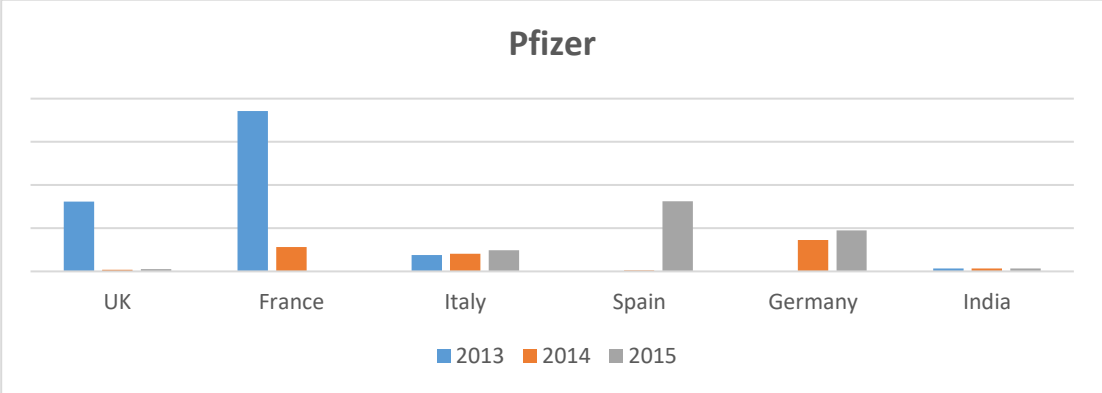
Astellas



Pfizer

Pfizer			
	2013	2014	2015
UK	32298	728	1116
France	74309	11275	0
Italy	7634	8184	9817
Spain	237	456	32426
Germany	0	14560	19050
India	1284	1298	1369

Pfizer



Roche

Roche			
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UK	43331	22601	36827
France	23490	25087	11083
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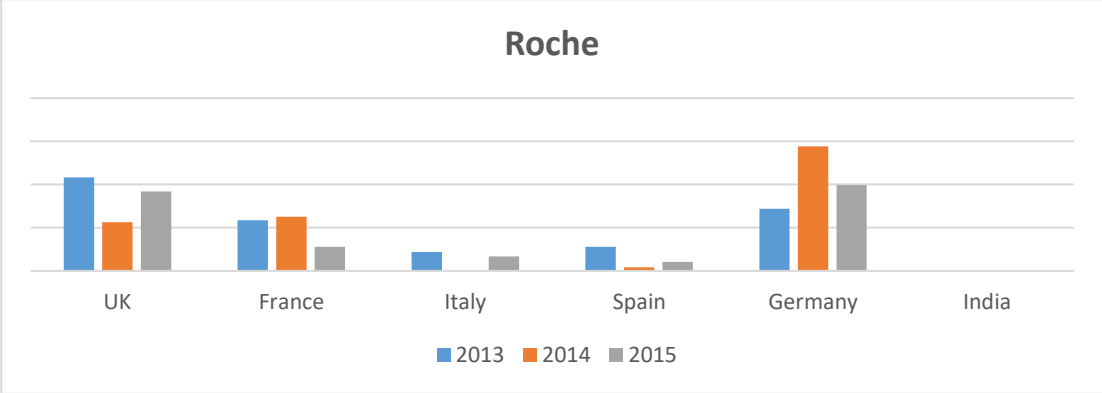
Roche

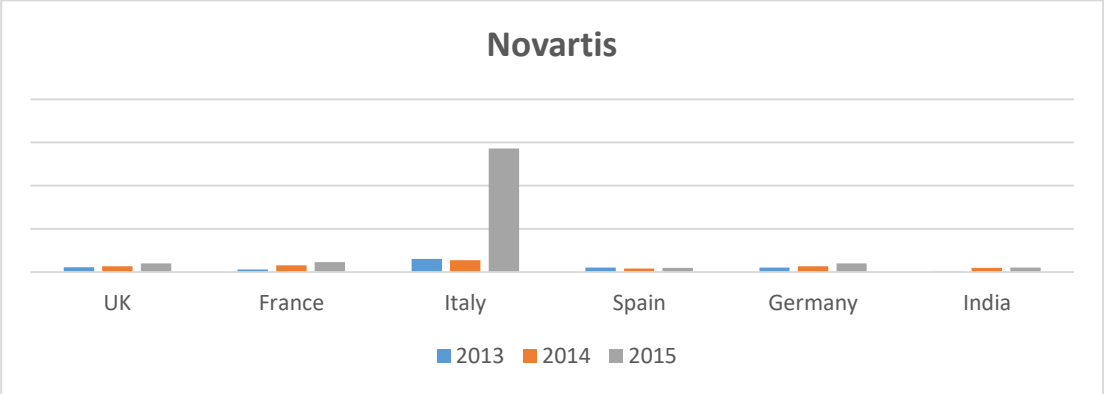


Novartis

Novartis			
	2013	2014	2015
UK	112906	132178	202513
France	63889	158939	227942
Italy	306195	275415	2858425
Spain	103350	86303	95379
Germany	103772	137351	201835

India	12986	98944	101908

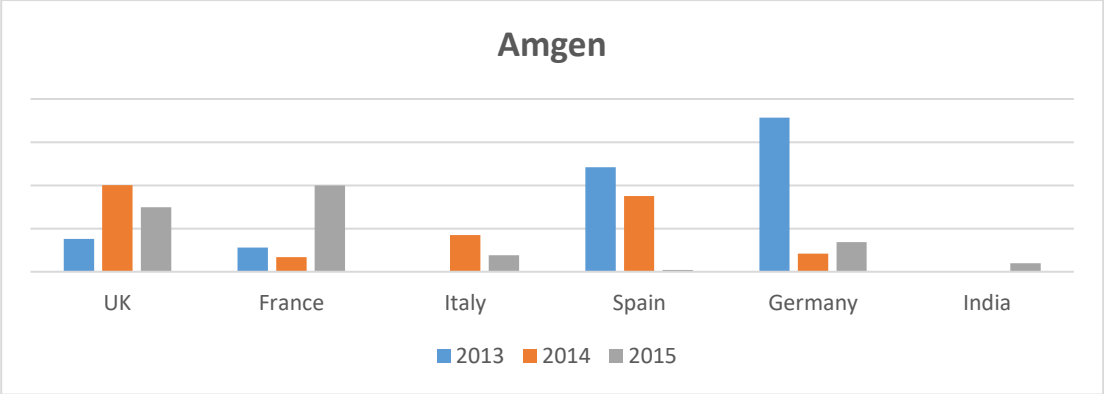
Novartis



Amgen

Amgen			
	2013	2014	2015
UK	15211	40106	29875
France	11275	6773	39953
Italy	0	16934	7683
Spain	48448	34997	768
Germany	71380	8398	13739
India	0	0	3904

Amgen



UCB

UCB			
	2013	2014	2015
UK	165617	317921	452993
France	74309	21328	127157
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Germany	8138	33394	20781
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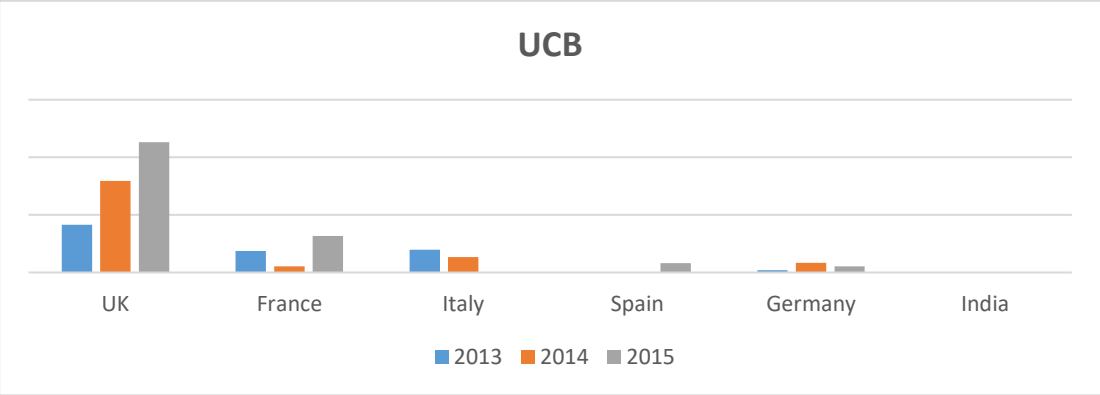
UCB



Abbvie

Abbvie			
	2013	2014	2015
UK	168634	145315	635451
France	120334	1211134	162273
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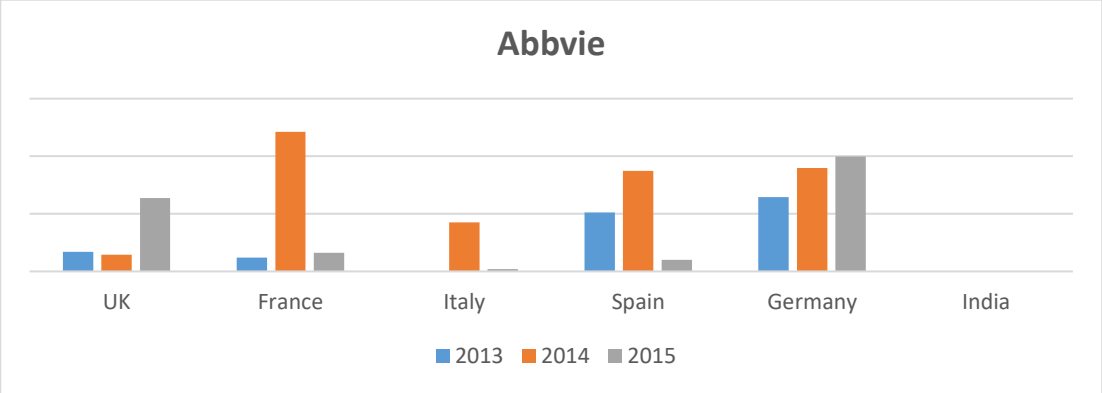
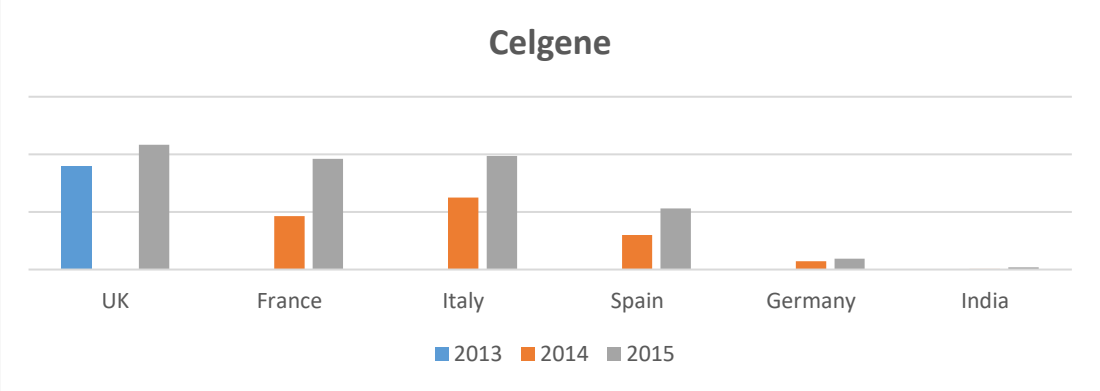
Abbvie



Celgene

Celgene			
	2013	2014	2015
UK	179099	0	216558
France	0	92783	192231
Italy	0	124715	197276
Spain	0	59891	105927
Germany	0	14560	19050
India	0	1145	3841

Celgene



Sanofi

Sanofi			
	2013	2014	2015
UK	9975	34583	31978
France	10405	0	23238
Italy	7634	8184	6119
Spain	48829	24413	27506
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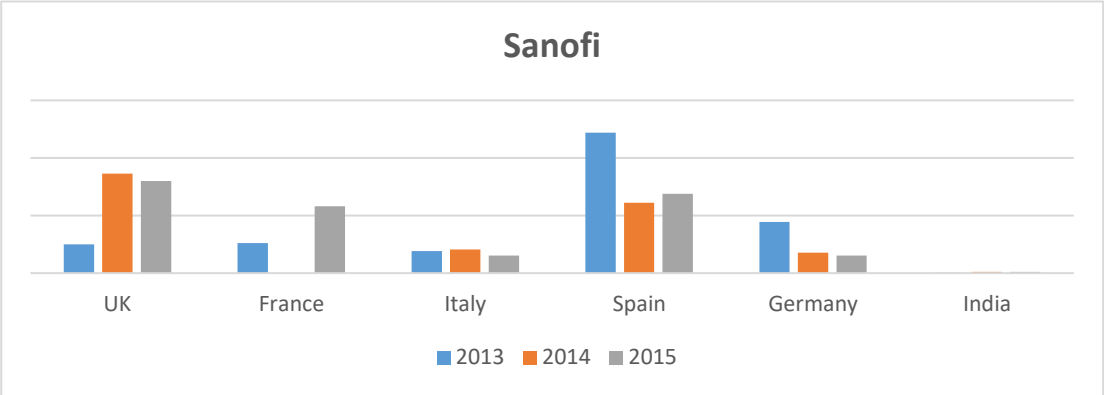
Sanofi



Discussion:

This study shows that pharmaceutical companies are supporting and moving forward towards PSP as this is the most efficient and better way to provide support to the patients who are unable to afford costly treatments & die out of cancer. Major pharmaceutical companies are increasingly funding in support of PSP as they see huge potential in this sector, apart from this view point, treatment could be made available to the poor & economically week sessions of the society. This study clearly shows that India, despite of having high morbidity & mortality is lacking in strong PSP in the field of oncology, and global pharma's are funding less in India as compared to EU5 nations. The major setback for PSP in India are lack of government support, poor guidelines lack of awareness & education, lack of identifying the potential of having strong PSP in oncology field in India.

Conclusion:

The Future of PSPs in India

PSPs will become more important in the future as most oncology drugs in the pipeline are targeted therapies, which will be too expensive for most patients in India. As the MRP of these drugs cannot be reduced directly, PSPs are a good way to indirectly cut the prices. Pharma companies also get tax relief and other government support for setting up PSPs. Pharma companies see PSPs as an integral part of oncology drug marketing and important for sustaining their oncology portfolios in India. PSPs can positively influence doctors' drug preferences. Doctors find fulfillment from helping patients receive cheaper treatment through the PAP, so patients are more likely to stick with their treatment and have better outcomes. This will, in turn, boost doctors' support of the brand. Having received treatment at a reduced cost, patients also would view the company in a positive light, thus improving its corporate image. All of these factors combine for a definite win-win-win situation for pharmas, doctors and patients.Pharma companies see PSPs as an integral part of oncology drug marketing and important for sustaining their oncology portfolios in India

List of Symbols and Abbreviations:

WHO-World Health Organization

ICMR- Indian Council of Medical Research

CIR- Crude Incidence Rate

ASR- Age Standard Rate

CMR- Crude Mortality Rate

USD – United State Dollar

PAP- Patient Assistance Programs

PSP- Patient Support Programs

RCC- Regional Cancer Centres

HCP- Health Care Professionals

Pharma- Pharmaceuticals

GIPAP- Glivec International Patient Assistance Programs

GSK- GlaxoSmithKline

GDP- Gross Domestic Product

Rs. - Rupee

CML- Chronic Myeloid Leukemia

GIST- Gastrointestinal stromal tumors

AML- Acute myeloid leukemia

MRP – Maximum Retail Price

NGO – Non Government Organization

EU5 – European Union 5 – UK, Italy, Spain, Germany, France

U.S. – United States

UK – United Kingdom

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