

REVIEW ARTICLE

Community Profiling. A Valuable Tool for Health ProfessionalsJasan Dannaway¹, Birinder Narang², Lyndal Trevena³^{1,2}Sydney Medical Program (SMP), Sydney Medical School, The University of Sydney, NSW 2006, Australia, ³Sydney School of Public Health, Sydney Medical School, The University of Sydney, New South Wales 2006, Australia

Abstract	Introduction	Methodology	Results	Conclusion	References	Citation	Tables / Figures
--------------------------	------------------------------	-----------------------------	-------------------------	----------------------------	----------------------------	--------------------------	----------------------------------

Corresponding Author

Address for Correspondence: Dr Jasan Dannaway, B. App. Sci. (Physiotherapy), MBBS (Hons I), Sydney Medical Program (SMP), Sydney Medical School, The University of Sydney, NSW 2006, Australia
 E Mail ID: jdan9820@uni.sydney.edu.au

Citation

Dannaway J, Narang B, Trevena L. Community Profiling. A Valuable Tool for Health Professionals. *Ind J Comm Health*. 2014;26(4):333-337.

Source of Funding : Nil **Conflict of Interest:** None declared

Article Cycle

Submission: 21/09/2014; **Revision:** 15/10/2014; **Acceptance:** 21/10/2014; **Publication:** 15/12/2014

Abstract

Community profiling is an essential skill for all health professionals. We highlight the value of this practice and outline the relevant evidence around the area. We provide a simple step-by-step 'how to'. We then give relevant contrasting examples of how community profiles can be produced. Hopefully this will serve as a guide in unfamiliar settings.

Key Words

Community Profile; Needs Assessment

Introduction**Community profiles. So what?**

As part of the Sydney Medical Program Community term, students are required to complete a 'community profile'. We believe this is an important skill for all health professionals to acquire.

Community needs and health care systems

Community profiling is the process by which one dissects the environmental characteristics, health status and the health system under which a community operates. The WHO document "Key components of a well-functioning health system" [1], describes successful health systems as 'adequately responding to a population's needs'. In order to achieve this, the notion of a "needs assessment" arose. This would aim to deliver healthcare based specifically on community health needs.

The needs, usually community specific, have to be ascertained [2]. In a series of publications in the BMJ in the late 1990s the process of a "needs assessment" was thoroughly described in an effort to facilitate cost effective and efficient health service provisions. This process has been presented in

further detail by Hawe *et al* [3]. Community profiling allows this process to be streamlined enabling health professionals to rapidly increase their understanding of the health system they are situated in.

Health professional mobility

Health professionals, through structured clinical exposure, are being trained to understand the health system in their immediate vicinity. But what if they found themselves in a different location? The World Health Organisation (WHO) document, "Health Professional Mobility and Health Systems" [4], suggests that in some countries, such as Spain, the inflow of foreign doctors may be as high as eight thousand annually. How these doctors adapt to their new community may be pivotal to that health system's long term success.

Why?

Having community background knowledge, before seeing patients, would certainly aid in increasing rapport and patient engagement and also decrease anxiety for all parties.

An integral aspect of this is 'cultural competence'. That is, the awareness of cultural differences, similarities and beliefs. The Australian National

Health and Medical Research Council outline recommendations for increasing cultural competence at the systemic, organisational, professional and individual levels including: recruitment and succession planning for diversity, implementing training in cultural competence, developing protocols that address cultural competency in data collection and developing practical toolkits to assist health professionals, incorporating existing best-practice examples [5]. For future referencing and increased efficiency, these community profiles could be placed in a repository/data bank to be utilised and updated by incoming health professionals.

How?

While there is no formula for compiling a comprehensive community profile, there are guidelines for a “needs assessment” [3,6] and publications addressing the topic [7,8] routine data sources usually provide enough information.

The first thing that needs to be decided is the level at which the profile will be conducted [7]. International, national, regional, or local community, For example, in a general (family) practice setting the local community is the key interest. For a large specialist referral children’s hospital, data on a national or even international level is more relevant. For the most comprehensive information it is best to search on a national level and then hone in on a specific community of interest.

International and national statistics are usually easy to attain. Many nations perform a regular Census. In England, an annual survey, commissioned by The

NHS Information Centre is conducted [9]. When survey information is unavailable or unable to be translated, there are a variety of other sources of information. The WHO has profiles for each of the United Nations (UN) members [10], government websites often contain survey results, the Demographic and Health Surveys (DHS) [11] project contains collated survey information, and UN Human development reports [12] can also be useful. This data can be used to describe populations, socioeconomic status, education, morbidity, mortality, and key health priorities.

In order to gain an overall community context, historical and cultural information should be researched using historical texts or media articles. Open source encyclopaedia’s (e.g. Wikipedia) and newspaper websites, may also be useful, although their content must always be scrutinised and references validated.

In order to narrow the search down to a smaller community, one needs to get creative. Routine government data collection is useful, but other sources such as medication regulation bodies, and insurance companies can provide specific information. Hospital data can offer details on admissions, diagnosis, operations and patient characteristics. If applicable, core practice data can add information on referrals, clinic attendance, and local patterns of health issues. There is generally a large amount of time put into data collection, so it should be stored, interpreted, translated and presented in a beneficial manner.

Examples

Example community profile- Shanghai, China

Environment

- Population, 23 million people.
- Good socioeconomic standard of living and high levels of education.
- Resident’s annual income far exceeds the countries average, and its students have been highly ranked, internationally, for their educational merits [13].
- One Child Policy led to a rapid increase in the elderly population. This impacted on the workforce, and has resulted in an influx of migrants from across the country. Many of these migrants have lower health awareness.
- Large number of foreign nationals, which allows for cultural diversity [14]. This may aid in the delivery of key health messages, especially relating to taboo areas, (e.g. Sexual and mental health) in a traditionally conservative, family oriented culture.
- Shanghai leading urbanisation trend across China.

Health status

- Average life expectancy of 82.51 years (2011) places them in the top ten in the world. Way above the Chinese national average of 74.84 years.

- Key health indicators well ahead of the rest of the country and much of Asia. Infant mortality fell from 6.58 per 1000 (2009), to 5.7 per 1000 (2011). Maternal mortality has also significantly improved from 9.61 to 7.36 per 100,000 in 2010 to 2011 respectively [15,16].
- Infectious diseases are decreasing, and chronic disease accounts for the majority of mortalities. In 2010, cardiovascular disease and cancer made up 35% and 31% respectively [17].
- High rate of smoking. Fortunately on the decline [18].
- Prevalence of hypertension and diabetes in China is on a significant rise.
- 25% rise in obesity in Shanghai's primary school children over the past decade, with 13% overweight and almost half of those obese [19].
- Sexual and mental health is becoming increasingly important. National low prevalence epidemic of HIV [20] and suicide rates of around 20 per 100,000 [21].

Health system

- Shanghai's system may not be suitable for its present or future situation. Healthcare delivered via a three tiered hospital system (community centres, district hospitals, tertiary hospitals), offers curative medicine and has little time to deliver preventative medicine or manage chronic diseases.
- Despite an emerging GP sector there is a lack of a "filter" for access to specialist care. This and a culture of relying on specialist advice for common and chronic ailments means they have a hospital system that is stressed at the third tier level [22].
- The Chinese government recently laid out a document "Directions on the Establishment of the General Practitioner System". A primary care system based on general practitioners is said to be rolled out by 2020, in an effort to prevent one in five deaths [23]. (Training primary care practitioners takes time and changing the mindset and behaviour of a population may take even longer.)
- Larger issues' relating to funding, a uniform pharmaceuticals scheme, and the streamlining of health insurance also needs to be considered.
- Where will the ancient system of traditional Chinese medicine fit, amongst current evidence based medicine approaches?

Example community profile: Amritsar, India

Environment [24,25]

- City located in the state of Punjab in Northern India.
- Population of 2,490,891 with 53% being male. A 15.48% population growth since 2001. This represents 8.99% of the Punjab population.
- Religion – ~75% of Amritsar is Sikh, and ~15% Christians.
- Life expectancy at birth is 72.0 years of age
- In 2001, ranked 10th out of 17 districts in literacy at a rate of 70.4%, increasing to 77.20% in 2011. In rural areas literacy is lower at 68.76%
 - Male literacy = 81.20%, Female literacy = 72.80%
 - 46% of people in Punjab reside in rural areas with many working in agriculture or manufacturing
- There is a gender bias present, where males are more literate and make up a larger part of the child population.
- Work participation rates show that 53.2% of males work, while only 16.3% of females do.

Health Status [26,27,28]

- Infant mortality rates for Punjab are 54/1000 in rural areas and 38/1000 in urban areas
- Female child mortality in Punjab is 45% higher than males in rural Punjab, and 41% in urban Punjab, compared to a national differential of 15% indicating possible discrimination in nutrition, health care and medication for females
- Tuberculosis, and Malaria are still prevalent but are decreasing
- In 1998, 74.8% of children and 42% of women were found to suffer from some form of anaemia,
 - In affluent areas of Amritsar, the prevalence of overweight and obesity was as high or higher than in some industrialized countries

- Drug abuse is a rising problem in Punjab. 8% of male adults are involved in illicit drug abuse and 73% of males used tobacco
- The incidence of mental health is rising, although only 0.01% of the health budget is allocated to mental health services
- Nationally, over the next 10 years, chronic diseases are projected to account for 53% of all deaths, where deaths from infectious diseases, maternal and perinatal conditions, and nutritional deficiencies combined will decrease by 15%

Health System [26,29,30]

- Amritsar has 33 hospitals
- Government Health facilities are based on a 4-tier system:
 - Sub-health centres (SHCs) provide basic health services
 - Above every 6 SHCs there is a Primary Health Centre (PHC) – servicing 20-40,000 people.
 - Above the PHC is the Community Health Centre servicing 100,000 people.
 - At the top of the system there are larger hospitals, medical colleges and specialty hospitals.
- India has a large private sector accounting for almost 70% of the hospitals and 65% of the beds
- Notable health policies that may cover health priorities are:
 - *National Health Policy 2002* – aims to reduce inequities and regional imbalances, and to strengthen primary health care.
 - *India's National Population Policy 2000* – addresses issues of child survival, maternal health and contraception, reproductive and child health
 - *National Rural Health Mission* – aims to increase expenditure in health sector from 0.9% of GDP to 2% over the next 5 years providing primary health care to poor and vulnerable sections and bridging the gap in rural health.

Community profiling in our “real” world

Student placement - Muswellbrook, N.S.W., Australia

What initially appeared to be a pretty town surrounded by vineyards, turned out to be a major hub for one of the world's largest coal mining industries. I discovered a young population and a large socioeconomic divide. There were specific issues around mental health, alcohol use and health awareness, compared to the surrounding region. There were heated discussions about the contribution of the coal mining industry to the prevalence of asthma in the children of the area. Community profiling gave me a real insight into the patient's background and I also feel it encouraged a more holistic and informed thought process in me.

Student placement- Squamish, British Columbia, Canada

I arrived without any understanding of the Squamish community. Over 20% were visible minorities and ~17% were from an Aboriginal background [31]. Many of the patients worked in labour-intensive jobs

in the nearby town of Whistler. I saw many cases of mechanically induced and persistent lower back pain leading to appropriate and sometimes inappropriate analgesia requests. Another important health issue was illicit drugs. I found that Squamish had a higher than provincial average of drug offences, and this resulted in many patients on methadone maintenance therapy. Profiling allowed me an insight into the “real” health issues pertinent to Squamish.

Implications

Governments and system planners are obviously key players in community profiling. Realistically it should be a skill held by all health professionals and therefore be routinely taught by educational institutions.

Why work blind when you can foresee what may walk through the door? Why not attempt to anticipate future community health issues and push for prevention rather than cure. Community profiling offers an escalating range of possibilities that we would be foolish to ignore. We just need to take the first simple step and let it take us from there.

http://www.who.int/healthsystems/publications/hss_key/en/index.html

References

1. World Health Organization. Key components of a well-functioning health system [Internet]. World Health Organization; 2010 [cited 2014 Oct 21]. Available from:
2. Wright J, Williams R, Wilkinson JR. Development and importance of health needs assessment. *BMJ*. 1998 Apr

- 25;316(7140):1310-3. Review. PubMed PMID: 9554906; PubMed Central PMCID: PMC1113037. [\[PubMed\]](#)
3. Hawe P, Degeling D, Hall J. Evaluating health promotion. MacLennan & Petty; 1990.
4. Wismar M, Maier C, Glinoos I, Dussault G, Figueras J, editors. Health Professional Mobility and Health Systems [Internet]. World Health Organization 2011, on behalf of the European Observatory on Health Systems and Policies; 2011 [cited 2014 Oct 21]. Available from: <http://www.euro.who.int/en/what-we-publish/abstracts/health-professional-mobility-and-health-systems-evidence-from-17-european-countries>
5. National Health and Medical Research Council. Cultural Competency in health: A guide for policy, partnerships and participation [Internet]. National Health and Medical Research Council. 2006 [cited 2014 Jan 10]. Available from: <https://www.nhmrc.gov.au/guidelines/publications/hp19-hp26>
6. Harris A. Needs to know: a guide to needs assessment for primary care. London: Churchill Livingstone; 1997.
7. Wilkinson JR, Murray SA. Assessment in primary care: practical issues and possible approaches. BMJ. 1998 May 16;316(7143):1524-8. PubMed PMID: 9582151; PubMed Central PMCID: PMC1113166. [\[PubMed\]](#)
8. Wright J, Walley J. Assessing health needs in developing countries. BMJ. 1998 Jun 13;316(7147):1819-23. PubMed PMID: 9624079; PubMed Central PMCID: PMC1113324. [\[PubMed\]](#)
9. Health Survey for England. NHS: The Information Centre [Internet]. Health Survey for England. [cited 2014 Oct 21]. Available from: <http://www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles-related-surveys/health-survey-for-england>
10. World Health Organization. World Health Organization [Internet]. Countries. [cited 2014 Oct 21]. Available from: <http://www.who.int/countries/en/>
11. DHS Program. Measure DHS [Internet]. [cited 2014 Oct 21]. Available from: <http://www.measuredhs.com/>
12. Human Development Reports [Internet]. [cited 2014 Oct 21]. Available from: <http://hdr.undp.org/en/>
13. Sam Dillon. Top Test Scores From Shanghai Stun Educators [Internet]. New York Times. 2010 [cited 2014 Oct 21]. Available from: <http://www.nytimes.com/2010/12/07/education/07education.html>
14. Bureau of Exit-Entry Administration Shanghai Municipal Public Security Bureau. RESIDENT FOREIGNERS IN SHANGHAI IN MAIN YEARS [Internet]. [cited 2014 Oct 21]. Available from: <http://www.stats-sh.gov.cn/tjnj/nje10.htm?d1=2010tjnj/E0214.htm>
15. Shanghai's life expectancy tops HK's, now longest in mainland China [Internet]. shanghaiist; 2012 [cited 2014 Oct 21]. Available from: http://shanghaiist.com/2012/02/20/shanghais_life_expectancy.php
16. Average life expectancy reaches 82.5 years in Shanghai [Internet]. People's Daily Online; 2012 [cited 2014 Oct 21]. Available from: <http://english.peopledaily.com.cn/90882/7734956.html>
17. Shanghai Statistical Yearbook 2011 [Internet]. [cited 2014 Oct 21]. Available from: <http://www.stats-sh.gov.cn/data/toTjnj.xhtml?y=2011e>
18. Yang GH, Ma JM, Liu N, Zhou LN. [Smoking and passive smoking in Chinese, 2002]. Zhonghua Liu Xing Bing Xue Za Zhi. 2005 Feb;26(2):77-83. Chinese. PubMed PMID: 15921604. [\[PubMed\]](#)
19. China's spoilt generation takes obesity to new level. Sydney Morning Herald [Internet]. [cited 2014 Oct 21]; Available from: <http://www.smh.com.au/world/chinas-spoilt-generation-takes-obesity-to-new-level-20110624-1gjgl.html>
20. China- 2010 Country Progress Report- UNAIDS [Internet]. Ministry of Health of the People's Republic of China; 2010 [cited 2014 Oct 21]. Available from: http://data.unaids.org/pub/Report/2010/china_2010_country_progress_report_en.pdf
21. Suicide and Suicide Prevention in Asia [Internet]. World Health Organization; 2008 [cited 2014 Oct 21]. Available from: http://www.who.int/mental_health/resources/suicide_prevention_asia.pdf
22. Shanghai Statistical Yearbook 2011 [Internet]. PATIENTS TREATED AND IN-PATIENTS IN MEDICAL TREATMENT INSTITUTION (2010). [cited 2014 Oct 21]. Available from: <http://www.stats-sh.gov.cn/tjnj/nje11.htm?d1=2011tjnj/E2105.htm>
23. General practitioner system to take shape in China by 2020 [Internet]. Xinhua. [cited 2014 Oct 21]. Available from: http://news.xinhuanet.com/english2010/health/2011-07/07/c_13971885.htm
24. Amritsar District : Census 2011 data [Internet]. Amritsar District Population Census 2011, Punjab literacy sex ratio and density. [cited 2014 Oct 21]. Available from: <http://www.census2011.co.in/census/district/602-%C2%ADâ€œamritsar.html>
25. Basic Data Sheet District Amritsar (02), Punjab (03). 2001 [cited 2014 Oct 21]; Available from: http://censusindia.gov.in/Dist_File/datasheet-0302.pdf
26. United Nations Development Programme. Health In Punjab - Punjab Human Development Resource 2004. 2004 [cited 2014 Oct 21]; Available from: <http://www.in.undp.org/content/india/en/home/presscenter/pressreleases/2004/11/16/punjab-human-development-report-2004/>
27. Sidhu S, Marwah G, Prabhjot. Prevalence of overweight and obesity among the affluent adolescent school children of Amritsar, Punjab. Coll Antropol. 2005 Jun;29(1):53-5. PubMed PMID: 16117299. [\[PubMed\]](#)
28. WHO Global Report. The Impact of Chronic Disease in India. [cited 2014 Oct 21]; Available from: http://www.who.int/chp/chronic_disease_report/en/
29. National Informatics Centre PSU, Chandigarh. Amritsar - Health [Internet]. Health. [cited 2014 Oct 21]. Available from: http://amritsar.nic.in/html/health_menu.htm
30. Ministry of Health & Family Welfare. National Rural Health Mission. 2005 [cited 2012 Oct 24]; Available from: http://www.nird.org.in/brgf/doc/Rural%20HealthMission_Document.pdf
31. BC Stats. Regional District 31 - Squamish-Lillooet Statistical Profile [Internet]. Province of British Columbia; 2010 [cited 2011 Feb 7]. Available from: www.bcstats.gov.bc.ca