Master of Public Health (MPH) students come from a wide range of health professional backgrounds. Graduate programmes in public health should equip alumni with knowledge and skills to analyse and integrate health research findings, and have a practical approach to current public health issues. In South Africa (SA), there is a need for health professionals with an adaptable public health approach who can contribute meaningfully to addressing public health problems and transforming the healthcare system.

The role and relevance of public health graduates in the South African health system have not yet been reported. Tracking of graduates is important to assess the effectiveness of study programmes, graduates’ worth for the healthcare labour market, and their contribution towards improving the healthcare system. Tracking of graduates by institutions is important for higher education and management were acquired in the MPH programme. Most reported that they were able to integrate the knowledge and skills acquired from the MPH degree in their current workplace.

### Methods
An emailed, self-administered questionnaire survey of graduates (N=61) was conducted in 2013. Forty-five (73%) of the 61 contactable public health graduates from the past 10 years returned the completed questionnaire; 28 (63%) are working in the public sector and 9 (22%) at academic institutions. Graduates reported that research skills, critical analysis, report writing, and leadership skills are applicable in their current work situation.

### Results
Data were collected on demographic characteristics, educational background, and those who did not respond were contacted telephonically. Data were obtained from a self-administered questionnaire sent via email to the 61 contactable alumni who graduated with an MPH degree between 2004 and 2013. Nine international graduates were not contactable and were excluded from the study population. Graduates were sent six weekly email reminders for 4 months to complete the questionnaire and those who did not respond were contacted telephonically.

### Conclusion
The MPH degree equips graduates with skills that contribute to addressing some of the public health problems in SA.

The tracking of graduates by institutions is important for higher education development to assess the social accountability, effect and influence of study programmes on the labour market. No undergraduate degree in public health is offered in KZN and students for the postgraduate degree are recruited from diverse professional backgrounds. Most of these students comprise clinicians who want to develop a population perspective on health and disease. The role and relevance of public health graduates in the SA health system have not been reported. Given the multidisciplinary background of these graduates, it is necessary to establish their role within the health system.

The objective of this study was to describe the educational and employment background of graduates and ascertain which skills acquired in the MPH programme are applicable in their current work situation.

### Methods
An observational cross-sectional survey was conducted between June and October 2013. Data were obtained from a self-administered questionnaire sent via email to the 61 contactable alumni who graduated with an MPH degree between 2004 and 2013. Nine international graduates were not contactable and were excluded from the study population. Graduates were sent six weekly email reminders for 4 months to complete the questionnaire and those who did not respond were contacted telephonically.

The questionnaire had a total of 23 closed- and open-ended questions. Data were collected on demographic characteristics, educational background and employment history. The questions included a component on the extent to which the MPH degree contributed to career progression and the skills...
acquired in the programme, as well as the graduates' performance in their
current positions. The questions on demographics, educational background
and employment history were closed ended and those on skills and competencies
were open ended.

The data were captured into Excel 2003 (Microsoft, USA) and exported
into the Statistical Package for the Social Sciences 15 (SPSS 15) (SPSS Inc.,
USA). Incomplete and other compromised data were omitted. Data were
summarised in appropriate frequency distribution tables and then analysed.

Ethical approval was granted by UKZN Human and Social Sciences
Research Ethics Committee (HSS/0615/013), and permission to conduct the
study on University alumni was granted by the Registrar.

Results

Of the 61 SA MPH graduates, all were contactable and 45 (73%) returned
self-completed questionnaires. The age, gender and educational background
data for other graduates (non-respondents) were available from the alumni
records. The non-respondents comprised females (60%), 40% were aged 30­
39 years and >50 years, and 36% were trained in the social sciences. Of the
45 respondents, 26 (58%) were female and 18 (40%) were 40­49 years old.
Twenty-one (48%) of the respondents’ first professional degree was in the
allied health sciences, 9 (21%) had a medical degree, 8 (18%) were nurses,
and 7 (14%) were from the social sciences (Table 1). With regard to current
employment of the respondents, 28 (63%) are working in the public sector
and 9 (22%) at academic institutions. The respondents were asked which
skills in their current employment relate to the MPH programme. The most
popular were research skills (82%), critical analysis (51%), report writing
(51%) and leadership and management (49%).

Table 1. Demographic characteristics of 70 MPH graduates

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Respondents (n=45), n (%)</th>
<th>Non-respondents (n=25), n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 - 29</td>
<td>1 (2)</td>
<td>-</td>
</tr>
<tr>
<td>30 - 39</td>
<td>12 (27)</td>
<td>10 (40)</td>
</tr>
<tr>
<td>40 - 49</td>
<td>18 (40)</td>
<td>5 (20)</td>
</tr>
<tr>
<td>&gt;50</td>
<td>14 (31)</td>
<td>10 (40)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>26 (58)</td>
<td>15 (60)</td>
</tr>
<tr>
<td>Male</td>
<td>19 (42)</td>
<td>10 (40)</td>
</tr>
<tr>
<td>Educational background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical</td>
<td>9 (21)</td>
<td>5 (20)</td>
</tr>
<tr>
<td>Nursing</td>
<td>8 (18)</td>
<td>8 (32)</td>
</tr>
<tr>
<td>Social science</td>
<td>7 (14)</td>
<td>9 (36)</td>
</tr>
<tr>
<td>Allied health</td>
<td>21 (48)</td>
<td>3 (12)</td>
</tr>
<tr>
<td>Current employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public sector</td>
<td>28 (63)</td>
<td>-</td>
</tr>
<tr>
<td>Academic institution</td>
<td>9 (22)</td>
<td>-</td>
</tr>
<tr>
<td>Research</td>
<td>3 (6)</td>
<td>-</td>
</tr>
<tr>
<td>Non-governmental</td>
<td>3 (6)</td>
<td>-</td>
</tr>
<tr>
<td>organisation</td>
<td>2 (3)</td>
<td>-</td>
</tr>
</tbody>
</table>

Discussion

Seventy MPH students have graduated at UKZN in a period of 10 years.
The number is low for a province with a population of 10.3 million and the
highest HIV, AIDS, and tuberculosis (TB) disease burden in SA, with an
estimated HIV-TB co-infection rate of 70%. The demand for public health
graduates should be high, taking into consideration the transformation and
development of the healthcare system in SA. The SA Human Resources for
Health (HRH) strategy has outlined the need to increase the output of MPH
graduates from the various schools of public health.

A substantial number of the graduates were between the ages 40 and
49 years. Generally, public health graduates are older than graduates of other
Master-level degrees, which has added implications for workforce
planning and development. The HRH strategy recognises that the ageing
healthcare workforce is a concern, as not enough young people are being
trained to take over key roles in the health sector. Most of the public health
graduates in this study were female, which is in line with other studies and is
consistent with the feminisation of healthcare workers, particularly in public
health globally.

This study shows a different trend in terms of the educational background
of people enrolling for the MPH degree. In Africa there were traditionally
more medical doctors registering for the MPH degree than for other
disciplines. In this study, graduates were from diverse backgrounds such
as allied health sciences (physiotherapy, pharmacy, environmental health and
medical science) – similar to results reported from six MPH programmes in
low- and middle-income countries.

Most graduates are working in the public sector and 22% are working
at academic institutions. They reported using the knowledge and skills
acquired in the MPH programme, such as report writing, critical analysis,
research, and leadership and management skills. SA faces a shortage of
highly skilled professionals with sound research skills. The National Plan
for Higher Education outlines that universities should produce graduates
with skills and competencies to participate in the modern world. The
results of the study suggest that the perceived skills and competencies
acquired in the MPH programme are relevant and adequate for the SA
labour market.

The public health sector is undergoing a major transformation, including
primary healthcare re-engineering and the introduction of the national health
insurance. These and other initiatives by the NDoH would increase the
demand for appropriately or highly trained public health practitioners. The
NDoH has outlined leadership, governance, research and development as
key priorities. In our study, the majority of MPH graduates who responded
work in the SA healthcare system, where they integrate the skills acquired
in the programme to improve their workplace. The SOPHs need to work closely
with the NDoH to ensure that public health graduates have appropriate skills
and competencies required for the healthcare labour market.

Study limitations

This survey was based on self-reporting by graduates, which is prone
to social desirability bias. As a relatively small number of graduates are
enrolled in this programme, a further study incorporating MPH graduates
from other programmes is recommended. Ascertaining employers’ percep-
tions of the MPH graduate's competencies and the relevance of these to the
labour market are needed. This study is part of a large research project in
which, alongside graduates, non-completers were interviewed to establish
differences between groups. The results are being analysed.
Conclusion

The MPH degree equips graduates with report writing, critical analysis, research, and leadership and management skills, which could contribute to addressing some of the public health problems in the healthcare system in SA. Most graduates reported that the skills attained in the MPH programme are incorporated at their current workplace. However, the number of public health graduates needs to increase to meet the HRH demand in SA. This could be achieved by incorporating research training and early exposure of health science undergraduates to population health.

References

6. Hoffman JC, Julie H. The academic transitional experiences of masters’ students at the University of the Western Cape. Curationis 2012;35(1). DOI:10.4102/curationis.v35i1.33