

CAHPIA Supporting Statement: Agricultural Health and Medicine

The National Centre for Farmer Health (NCFH) sits 300 kilometres west of Melbourne in the agricultural hub of Hamilton and is a partnership between Deakin University and Western District Health Service (WDHS). Rural populations, particularly those in agricultural communities require health provision that is interdisciplinary and cross-sectoral to address the high rate of workplace deaths [1], preventable injuries and illness [2, 3]. To address these unique health and medical characteristics of agricultural populations, education in agricultural health and medicine (AH&M) was established through the School of Medicine at Deakin University to develop rural and health professionals who are culturally competent. Through Deakin, the NCFH partnership offers the only [Graduate Certificate of Agricultural Health and Medicine](#) (GCAHM) in Australia.

Prior to the GCAHM, there were no formal academic units for health and rural professionals to gain knowledge and develop expertise in preventing, diagnosing and treating illness or injury that is specific to farming communities outside of ‘on the job’ experience. Exacerbating this was the difficulty the health workforce had connecting with farm men and women describing farmers as ‘hard to engage’ and like ‘a lost tribe’ [4, 5]. With international and recently-trained professionals joining rural workforces it was essential to provide opportunities to improve situational knowledge and skills in line with growing societal expectations that health professionals make prevention a larger priority and be knowledgeable about specific population-based issues [6].

Our approaches to teaching that influence motivate and inspire students to learn.

To successfully teach AH&M education to predominantly postgraduate or returning students, the course utilises Kolb’s adult learning model [7] and Kirkpatrick’s four levels of learning evaluation [8]. The core curriculum includes a five-day, face-to-face intensive course ([see Attachment 1](#)). Our approach combines both developmental and operational online teaching styles. Students use (and share) their own experiences to reflect on and give context to the curriculum. This approach harnesses the reality and possibility of making a difference and inspires students to learn. This is illustrated through the videos of past students particularly Agriculturalist Amy Fay, Registered Remote Nurse Lisa Taggart and Public Health Registrar Dr Mark Newell ([See Videos](#)). The teaching objective is to motivate and inspire rural health and medical professionals to be a more engaged, literate, competent and capable to address rural and farmer health inequities through cross sector cooperation. The iterative nature of the GCAHM model encourages students to reflect on their current approach to prevention, delivery and practice of health or rural services in agricultural populations, to motivate insight, identify gaps and address attitudinal challenges of serving these populations.

Development of curricula and resources that reflect a command of the field

[Agricultural Health and Medicine](#) uses a curriculum framework from the College of Public Health, University of Iowa, the only other providers of Agricultural Health and Medicine training globally ([see Attachment 2](#)). Extensive research conducted by the NCFH and collaborators has been embedded into the lectures and learning materials provided in the GCAHM curricula. This has been an important and unique feature of the course that maintains and confirms the NCFH as experts in agricultural health and medicine. The curricula team is comprised of practising professionals from public health, medicine, agriculture, psychology, addiction, rural surgery, ergonomic design, respiratory medicine, and veterinary backgrounds ([see Attachment 3](#)) highlighting their command of the AH&M field. Problem based learning and group work to solve real agricultural community and public health issues are cornerstones of the course, in addition to immersive experiences including visits to livestock exchanges and working farms to understand the realities of OH &S, pesticides, machinery and livestock interactions. These visits not only embed the knowledge obtained throughout the week, they establish the NCFH teaching and public health messages within the community.

Approaches to assessment and feedback that foster independent learning

Self-directed online discussion forums, group work assignments, short answer and multiple-choice questions (MCQ) and essays are the assessment approaches used. Students also provide peer feedback and reflection during group work, and self-assessment of performance assists in fostering independent learning. Assessment tasks have been designed to:

- Reflect clear alignment between expected learning outcomes, what is taught and learnt, and the knowledge and skills assessed through a closed curriculum loop.
- Assess the capacity to analyse and synthesize new information rather than just recall information
- Provide students with explanatory and diagnostic feedback as well as grades.

An outline of our learning outcomes is provided ([see Attachment 4](#)). Unit topics, learning outcomes and assessments are annually reviewed to ensure they meet the expectation and requirements of a Graduate Certificate program at Deakin. The quality of our approaches has been formally recognised with AH&M receiving an overall average of 4.6/5 for all questions on the SETU surveys sitting well above the university and faculty unit averages. To improve the learning experience, all presenters are individually evaluated by the students using a 7 point Likert score on learning experience with feedback provided back to every presenter annually ([see Attachment 5](#)).

Scholarly activities that have influenced and enhanced learning and teaching

Recognising the diversity of public health, rural practice and rural policy the core units of the GCAHM are accredited for continuing professional development through the Australian Veterinary Association, the Australian College of Rural and Remote Medicine, the Australian Association of Social Workers and the Australian College of Nursing. Deakin University also formally recognises the Australian College of Rural and Remote Medicine (ACRRM) and Royal Australian College of General Practitioners (RACGP) fellowships as credit for prior learning for GP registrars enrolled in the GCAHM.

As AH&M is a new field of endeavour, scholarly activities that enhance learning and teaching and provide further contribution in the field has been important. Some of these include biennial conferences (<http://www.farmerhealth.org.au/conferences>) and supporting students with conference presentations and introductions to research communities. A 2013 survey (n =101) reported 98.8 % of students believed their abilities in anticipating, diagnosing, treating and preventing occupational injuries had improved with 90.0% agreeing that AH&M had helped them address occupational and environmental hazards and advocate for their agricultural communities. Over 80% worked in rural settings.

Respect and support for the development of students as individuals.

Students are exposed to a difference network of professionals who all work within agricultural communities. The cross-sectoral methods utilised by AH&M means there are new areas to be learnt and opportunity for individual development and contribution. A recent example is the peer reviewed publication of a student's assessment task by rural pharmacist Hana Morrissey [9] providing evidence of interdisciplinary support and personal and professional development. Our agricultural community respects the students and this is best illustrated by the annual Southern Grampians Shire Council Civic reception to welcome students and academic presenters. To support students post AH&M, assist them with their work in agricultural communities and provide ongoing development opportunities, a novel approach continues through www.farmerhealth.org.au. Reflecting best practice in public health standards through its accreditation through [Health on the Net](#) (HONcode) this site has over 82,000 unique users ([see Attachment 6](#)) keeping past students connected to this growing field of AH&M.

References

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