Supplementary material-Study Protocol. Primary healthcare transformation through patient centred-medical homes: Improving access, relational care and outcomes in an urban Aboriginal and Torres Strait Islander population, a mixed methods prospective cohort study.

Outcome measures

Primary outcome measures

These were selected on the basis that they aligned with evaluation objectives, were considered a priority for the participating health service, reflect common and important conditions (for example, cardiovascular disease and diabetes which account for a significant burden of disease for the Aboriginal and Torres Strait Islander population[1]) and reflected current guidelines.

*Access:* The proportion of the catchment population that are regular clients at the service. This is a measure routinely used across the IUH network in planning services and identifying areas of unmet need.

*Continuity of care score* (or usual provider index) [2]. This measures the concentration of a patient’s visits to the most common primary care providers among people with at least 4 attendances in a two-year period. A score of 0.75 is defined as good continuity.

*Proportion of patients with Type 2 diabetes with glycosylated haemoglobin (HbA1C) <7%:* as per guideline recommended targets [3]. A change from baseline was also selected given any improvement in levels will confer a clinically significant benefit in the long term.

*Proportion of patients at high absolute cardiovascular disease risk* [4]: Based on clinically determined risk as well as according to the Framingham risk equation as per recommended guidelines.

*Rates of hospital admissions (total and separately by potentially preventable admissions and non-potentially preventable admissions) and emergency department presentations*[5]: Included are hospitalisations which could have potentially been prevented through the provision of appropriate preventative health interventions and early disease management in primary care and community-based care settings (including by general practitioners, medical specialists, dentists, nurses and allied health professionals). They are often used as indicator of the effectiveness of non-hospital care and are currently used for national reporting on the Australian primary healthcare system.

Secondary outcome measures

*Regularity of care score:* This measures the variation in time intervals between consecutive primary care provider visits for those with 3 or more annual attendances; scores range from 0 to 1 (perfect regularity)[6], and is used as an indicator of quality primary care.

*Health assessment and chronic disease care planning:* All Australians who identify as Aboriginal or Torres Strait Islander are eligible to access this annual health check, which is funded by the Australian Government via Medicare. A health assessment involves an assessment by a general practitioner (GP) of a patient’s physical, psychological and social wellbeing [7]. GP management plans and team care arrangements, also funded through Medicare for those with at least one long-term condition, includes
chronic disease care planning as well as coordination and referral to other providers to enact that care plan (completed every 12 months) [7]. A review of both services can be claimed through Medicare and is recommended 6 monthly. The ratio of review items to annual care plans/team care arrangements was selected as a secondary outcome as, from the perspective of the service, this is more indicative of proactive management and follow-up than an annual claim alone. This is also consistent with the Commonwealth government approach incorporated into service incentive payments through the PIP IHI program.

Self-reported health and wellbeing: To collect information relating to health and wellbeing as understood from Aboriginal terms of reference, we used an adapted version of the survey questionnaire currently used in a national study of Aboriginal and Torres Strait Islander Wellbeing (the Mayi Kuwayu [MK] Study) [8]. This survey also collects information on cultural determinants of health and wellbeing, such as cultural practice and expression, experiences and environment and family support and connection. The baseline survey was developed through extensive community consultation and in partnership with Aboriginal and Torres Strait Islander organisations across states and territories and is an exemplar of Aboriginal and Torres Strait Islander governance. Several survey items specifically developed or culturally modified for the MK study have been[9, 10] validated or are undergoing validation. Using measures that had been developed by and for Aboriginal and Torres Strait Islander peoples was a priority of the participating services and the ISoC2 study team.

Self-reported relational continuity of care, shared decision making and agency: Patient-reported experience and outcome measures are commonly used in the literature [11]; however, there are currently limited examples of culturally modified measures that have been validated. Collaborative stakeholder consultation conducted by IUH identified a need to include additional questions to address gaps in the MK survey around continuity of care and connection to the health service and health care team. Additional questions were developed by the investigators through iterative feedback, piloted for face validity and comprehension [12, 13] and were included in the front-end of the MK study. These questions incorporated key elements of other validated tools [14-18] whilst ensuring the use of Aboriginal and Torres Strait Islander relational language terms and ways [19, 20] and cultural responsiveness to community involved in the study [21].

This relates to the following secondary outcomes:

1. Self-reported relational continuity of care score
2. Self-reported shared decision-making and reciprocity in care planning.
3. Self-reported agency regarding health care access and engagement.

Work is currently in progress validating these self-reported patient experience measures.

Additional measures relating to processes of care (e.g documenting smoking status) and other clinical outcomes (e.g body mass index), as routinely collected for reporting requirements [22] will also be reported.


