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Original Research

Linking routinely collected social work, education and health data to enable monitoring of the health and health care of school-aged children in state care ('looked after children') in Scotland: a national demonstration project



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ABSTRACT

Background and objectives: Children in state care ('looked after children') have poorer health than children who are not looked after. Recent developments in Scotland and elsewhere have aimed to improve services and outcomes for looked after children. Routine monitoring of the health outcomes of looked after children compared to those of their non-looked after peers is currently lacking. Developing capacity for comparative monitoring of population-based outcomes based on linkage of routinely collected administrative data has been identified as a priority. To our knowledge there are no existing population-based data linkage studies providing data on the health of looked after and non-looked after

Abbreviations: CHI, Community Health Index; CLAS, Children Looked After Survey; ISD, NHS National Services Scotland Information Services Division; LA, Local Authority; NHS, National Health Service; SCN, Scottish Candidate Number; SIMD, Scottish Index of Multiple Deprivation.

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children at national level. Smaller scale studies that are available generally provide very limited information on linkage methods and hence do not allow scrutiny of bias that may be introduced through the linkage process.

Study design and methods: National demonstration project testing the feasibility of linking routinely collected looked after children, education and health data.

Participants: All children in publicly funded school in Scotland in 2011/12.

Results: Linkage between looked after children data and the national pupil census classified 10,009 (1.5%) and 1757 (0.3%) of 670,952 children as, respectively, currently and previously looked after. Recording of the unique pupil identifier (Scottish Candidate Number, SCN) on looked after children returns is incomplete, with 66% of looked after records for 2011/12 for children of possible school age containing a valid SCN. This will have resulted in some under-ascertainment of currently and, particularly, previously looked after children within the general pupil population. Further linkage of the pupil census to the National Health Service Scotland master patient index demonstrated that a safe link to the child's unique health service (Community Health Index) number could be obtained for a very high proportion of children in each group (94%, 95% and 95% of children classified as currently, previously, and non-looked after, respectively). In general, linkage rates were higher for older children and those living in more affluent areas. Within the looked after group, linkage rates were highest for children with the fewest placements and for those in permanent fostering.

Conclusions: This novel data linkage demonstrates the feasibility of monitoring population-based health outcomes of school-aged looked after and non-looked after children using linked routine administrative data. Improved recording of the unique pupil identifier number on looked after data returns would be beneficial. Extending the range of personal identifiers on looked after children returns would enable linkage to health data for looked after children who are not in publicly funded schooling (i.e. those who are preschool or postschool, home schooled or in independent schooling).

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Introduction

In Scotland, children in state care (referred to as 'looked after children') are those under supervision or accommodated by local authorities.^{1–3} Children can become looked after following a voluntary agreement with their parents or a compulsory process involving the Scottish Children's Hearing System⁴ or the courts, and their requirement for such support can reflect care, protection and/or offending needs. Looked after children may live at home with their parents under social work supervision ('looked after at home'), with other family members or friends ('kinship care'), with foster carers or prospective adopters or in residential accommodation provided by the state (residential units, schools and secure care).⁵

Around 15,400 children in Scotland were looked after at the end of July 2015, around 1.5% of all children aged less than 18 years.⁶ The health, educational and wider social outcomes of looked after children are generally poorer than those of children who are not looked after.^{7–9} Current Scottish Government policy strongly supports improving the experience and outcomes of looked after children¹⁰ and emphasises the need for robust routine data to enable monitoring of care provided and outcomes achieved.¹¹

Currently, routine data returned by local authorities to the Scottish Government on children being looked after form the

basis of an annual statistical publication on children's social work.⁶ In addition, the Scottish Government routinely links the looked after data to administrative data returned by local authorities on education provision to enable monitoring of the educational attainment and after school destinations of looked after children compared to all children.¹² Scotland has a wide range of high quality routine health data that can be used to monitor child health. Health records in general do not include information on children's looked after status hence they cannot be used in isolation to assess the health of looked after children. Linkage of routine looked after and health data would open up the possibility of robust population-based monitoring of the health outcomes of looked after and non-looked after children, and developing such a linkage has been identified as a priority.¹¹

Here we report the results of a national level demonstration project linking routinely available looked after children data and health data for the first time in Scotland. To our knowledge, this is the first time globally that such a national level, population-based linkage study has been undertaken. This paper reports the methodology and results of the linkage process: a separate paper reports the results of a follow on analysis assessing the dental health of looked after and non-looked after children using the linked data set created (submitted for publication, available on request). With this paper, we aim to provide information of use to future researchers wishing to assess the health and

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