



Supporting Information

Supplementary methods

**This appendix was part of the submitted manuscript and has been peer reviewed.
It is posted as supplied by the authors.**

Appendix to: Shand AW, Bell J, Henry A, et al. Rapid increase in intravenous iron therapy for women of reproductive age in Australia. *Med J Aust* 2020; doi: 10.5694/mja2.50618.

Methods

We analysed dispensing data for a 10% random sample of Australians eligible to receive subsidised medicines under the Pharmaceutical Benefits Scheme (PBS); the details of this collection has been described previously.¹ The PBS is a national, federally funded government program under which all Australian citizens and permanent residents and eligible foreign visitors (with reciprocal health care agreements with Australia) are eligible to receive subsidised medicines.¹ In brief, the PBS subsidises prescribed medicines listed on the PBS Schedule dispensed by community pharmacies and private hospitals. In addition, the PBS subsidises medicines dispensed to public hospital outpatients, non-admitted patients, and inpatients being discharged (in most but not all states after Public Hospital Pharmaceutical Reforms).^{1,2} PBS data include medicine dispensed, date of dispensing, prescriber type, and patient age and sex. To protect the privacy of individuals, they are assigned a scrambled identifier, and all dates of dispensing are offset randomly by +14 or -14 days, with the direction of the offset the same for all records for each individual.

We included all women of reproductive age, 18–44 years, with a dispensing claim for intravenous iron to treat IDA (Anatomical Therapeutic Classification code, B03AC) between January 2013 and December 2017. During this period, three intravenous preparations were available: iron polymaltose and iron sucrose were available 2013–2017, and ferric carboxymaltose was available from June 2014. The PBS listing indications, PBS codes, brand names and costs for all iron preparations are presented in tables 1 and 2.

Statistical analysis

We calculated the number of intravenous iron dispensing claims, overall and by year dispensed, type of iron preparation, and age group (18–24, 25–29, 30–34, 35–39, 40–44 years). We then extrapolated (multiplied by 10) to the national level the number of dispensing claims and the number of women dispensed intravenous iron. We calculated overall dispensing rates, based on the Australian Bureau of Statistics 2017 estimated resident population of women aged 18–44 years.³ For each woman dispensed intravenous iron, we determined the number of dispensing claims (1, 2, ≥3) and type of prescriber (general practitioner; medical specialist, nurse midwife or allied health or other medical practitioner).

Ethics approval

Approval for the use of the data was obtained from the Australian Department of Human Services External Request Evaluation Committee, and the study was approved by the NSW Population Health Services Research Ethics Committee (PHSREC approval number 2013/11/494).

Table 1. Unrestricted Pharmaceutical Benefit Scheme (PBS) listings of parenteral iron products

Item	Name, form and strength, pack size	Max. quantity, units	Repeats	DPMQ	Brand name and manufacturer
10104T	Iron (as ferric carboxymaltose) 500 mg/10 mL injection, 1 x 10 mL vial	2 (1000 mg)	1	\$306.96	Ferinject (Vifor Pharma)
2593L	Iron (as polymaltose) 100 mg/2 mL injection, 5 x 2 mL ampoules	5 (2500 mg)	0	\$23.16	Ferrosig (Sigma) Ferrum H (Aspen Pharmacare Australia)
10229J	Iron (as sucrose) 100 mg/5 mL injection, 5 x 5 mL ampoules	5 (2500 mg)	0	\$39.53	Venofer (Aspen Pharmacare Australia)

DPMQ = Dispensed Price for Maximum Quantity.

Source: PBS website (<http://www.pbs.gov.au/browse/body-system?depth=4&codes=b03ac#b03ac>); special pricing arrangements apply.

Table 2. Pharmaceutical Benefit Scheme (PBS) listings of parenteral iron products with Authority Required (STREAMLINED) codes for patients undergoing haemodialysis

Item	Name, form and strength, pack size	Max. quantity, units	Repeats	DPMQ	Brand name and manufacturer
2805P	Iron (as polymaltose) 100 mg/2 mL injection, 5 x 2 mL ampoules	5 (2500mg)	5	\$23.16	Ferrosig (Sigma) Ferrum H (Aspen Pharmacare Australia)
8807M	Iron (as sucrose) 100 mg/5 mL injection, 5 x 5 mL ampoules	5 (2500mg)	5	\$39.53	Venofer (Aspen Pharmacare Australia)

DPMQ = Dispensed Price for Maximum Quantity.

Source: PBS website (<http://www.pbs.gov.au/browse/body-system?depth=4&codes=b03ac#b03ac>); special pricing arrangements apply.

References

1. Mellish L, Karanges EA, Litchfield MJ, et al. The Australian Pharmaceutical Benefits Scheme data collection: a practical guide for researchers. *BMC Res Notes* 2015; 8: 634.
2. Council of Australian Governments. National Health Reform Agreement. July 2011. http://www.federalfinancialrelations.gov.au/content/hpa/health/_archive/national-agreement.pdf (viewed Apr 2020).
3. Australian Bureau of Statistics. 3101.0. Australian demographic statistics, September quarter 2017. Mar 2018. <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3101.0Main+Features1Sep%202017?OpenDocument> (viewed Apr 2020).