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# Community attitudes to assisted reproductive technology: a 20-year trend

Gabor T Kovacs, Gary Morgan, E Carl Wood, Catherine Forbes and Donna Howlett

WHEN LOUISE BROWN, the world's first "test-tube baby", was born in the United Kingdom in 1978,<sup>1</sup> there was worldwide enthusiasm about the great advances in reproductive medicine. When Australia followed with a series of in-vitro fertilisation (IVF) pregnancies and births in 1981,<sup>2,3</sup> this enthusiasm swept Australia. Nevertheless, there were some vocal critics of the reproductive revolution who demanded that research on IVF be banned.<sup>4</sup>

Over the past 20 years, we have carried out a number of community attitude polls asking Australians about whether they approve of IVF.<sup>5,6</sup> We review here the changing attitudes to IVF over that period.

## METHODS

### Surveys and participants

The Roy Morgan Research Centre Pty Ltd (RMRC) is an Australian nationwide consumer research organisation. Interviewing for Morgan polls is conducted by a team of 110 trained interviewers sent to "cluster points" (randomly selected from the electoral roll). The cluster points are chosen to represent city and country areas throughout Australia on a proportion-of-population basis. Ten dwellings are visited at each cluster point, resulting in about 1000 people surveyed. All interviewers, who are carefully briefed, conduct interviews on Saturdays and Sundays during daylight hours. Within each cluster point, participants are

## ABSTRACT

**Objective:** To review the results of opinion polls on community attitudes to in-vitro fertilisation (IVF) and other aspects of assisted reproductive technology over a 20-year period.

**Design, setting and participants:** Fourteen Australia-wide interview surveys that included questions relating to IVF were carried out between July 1981 and November 2001 as part of regular Morgan polls of community attitudes on various topics. Each survey involved about 1000 respondents drawn from randomly selected "cluster points" in urban and rural locations.

**Main outcome measures:** The proportion of people who approved or disapproved of various aspects of IVF treatment.

**Results:** Support for IVF to help infertile married couples increased from 77% in 1981 to 86% in 2001. Approval for IVF procedures being supported by Medicare funding rose from 70% in 1981 to 79% in 2000.

**Conclusions:** Community approval of the use of IVF to treat infertility has risen significantly in Australia over the past 20 years.

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selected by sequentially (from one household to the next) interviewing the youngest male (aged  $\geq 14$ ), then youngest female (aged  $\geq 14$ ), then older male, and finally older female. To confirm reliability, a random selection of respondents is re-contacted within 7 days and asked to confirm their answers.

Between July 1981 and November 2001, the RMRC conducted 14 surveys that included questions on IVF. The questions were designed by Margaret Brumby, a Lecturer at the Centre for Human Bioethics and Faculty of Education, Monash University.<sup>6</sup>

Each of the 14 surveys included a question on the respondent's attitude to

the "simple case" of using IVF to help infertile married couples (Box). (Apart from the wording of the question itself, respondents were given no background information on IVF.)

As specific aspects of IVF became controversial and more widely discussed in the media, later surveys included supplementary questions on other aspects of assisted reproductive technology (eg, attitudes towards the use of donor eggs, donor sperm, embryo freezing, embryo donation and surrogacy, and opinions on whether the treatment should be funded by Medicare).

### Statistical analysis

In each survey, all respondents were classified into three groups: those who "approved", "disapproved", or were "undecided". Sample sizes and standard errors were available for all surveys except the first two (July 1981 and February 1982). For this reason, results of the first two surveys were not included in aggregate percentages. Standard errors were adjusted by RMRC to account for clustering effects.

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We compared the results of "pre-2000" with "post-2000" surveys. Aggregate percentages for pre-2000 and post-2000 were determined using a weighted average of the individual survey percentages (to account for "between study" variation), using the method of DerSimonian and Laird.<sup>7</sup> We also calculated an odds ratio (OR) comparing the odds of post-2000 approval with the odds of pre-2000 approval.

### Study approval

The study was approved by the Monash IVF Research Committee. As no identifying data were used, ethics committee approval was not sought.

## RESULTS

### Infertile married couples

For the "simple case" scenario of whether IVF should be available to help infertile married couples, there was an overall trend of rising approval among respondents over the period July 1981 to November 2001 (Box).

The aggregate percentage of approvals for the July 1982–January 1997 surveys was 74.8% (95% CI, 73.0%–76.6%), compared with 85.6% (95% CI, 83.0%–88.2%) for the October 2000–November 2001 surveys. The 10.8 percentage-point increase in approval rate (accompanied by a fall in disapproval rate) corresponds to an OR of 2.0 (95% CI, 1.6–2.6).

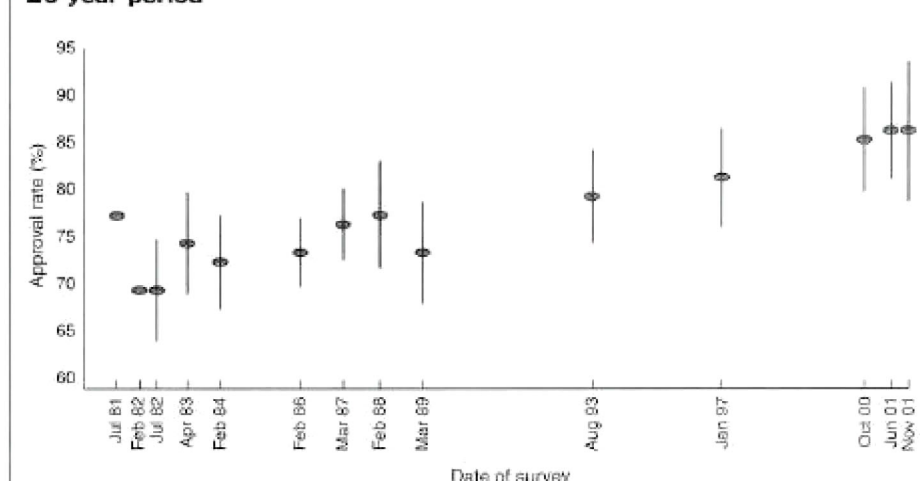
### Embryo donation

The July 1982 survey first explored the attitudes to embryo donation. Respondents were asked whether they approved of couples with excess embryos (after infertility treatment) being allowed to donate embryos to other couples: 45% approved, 30% disapproved and 25% were undecided. By the August 1993 survey, the approval rate had risen to 65%, with 30% disapproving and 5% undecided (OR, 2.3; 95% CI, 1.5–3.4).

### Surrogate mothers

Attitudes to IVF surrogacy were first tested in July 1982. Respondents were asked, "The fertilised egg from one married couple could be put into

**Proportion of Australians approving of in-vitro fertilisation to help infertile married couples, based on 14 community opinion polls conducted over a 20-year period**



Respondents were asked: "Thinking now about the test-tube baby method or IVF program for helping married couples who can't have children. Do you approve or disapprove of this method for helping married couples who can't have children?" (Vertical bars indicate 95% CIs, where available.)

another woman, who would then become pregnant. She would give the baby back to the couple after it was born. Should this be allowed?": 32% of respondents approved, 44% disapproved and 24% were undecided. In the 1993 survey, when asked about "commercial" surrogacy, 30% of respondents approved, 59% disapproved and 11% were undecided; however, if the surrogacy was "altruistic", 53% approved, 36% disapproved and 11% were undecided. The OR of 0.91 (95% CI, 0.6–1.4) for change in approval rate for commercial surrogacy between the 1982 and 1993 surveys was not statistically significant. However, the increase in approval rate for altruistic surrogacy over the same period was significant (OR, 2.4; 95% CI, 1.6–3.6).

### Single women

The possible use of donor sperm by single women was first surveyed in 1993. Respondents were asked, "Thinking about single women with no male partner who wish to become pregnant having access to donor sperm from a sperm bank provided they pay associated costs. Do you approve or disapprove of that?": 18% of respondents approved (the proportions of respondents who disapproved or were undecided are no longer available).

When asked the same question in the October 2000 survey, 38% of respondents approved, 54% disapproved and 8% were undecided. The increase in approval rate corresponds to an OR of 2.8 (95% CI, 1.8–4.3).

### Lesbian women

In the 1993 survey, when asked about attitudes to the use of donor sperm by lesbian women, 7% of respondents approved (the proportions of respondents who disapproved or were undecided are no longer available).

When the same question was repeated in October 2000, the approval rate had risen to 31%, with 59% disapproving and 10% undecided. This represents a dramatic increase in approvals from the 1993 study (OR, 6.0; 95% CI, 3.0–11.0).

### Medicare funding

In the very first survey (July 1981) respondents were asked, "Should couples be able to claim their test-tube baby treatment on health insurance?". Until 1990, there was no specific funding for IVF services, although some parts of the service attracted a rebate as a normal part of medical treatment. Over a 20-year period there has been an overall increase in community approval of

Medicare funding for IVF procedures for infertile couples: 70% (July 1981), 64% (February 1992), 73% (January 1997), 79% (October 2000).

Some primary data from the surveys can be viewed on the Roy Morgan website.<sup>8</sup>

## DISCUSSION

As part of the biweekly survey of community attitudes — primarily relating to political issues — RMRC occasionally included questions on assisted reproductive technology to assess the Australian community's attitudes to IVF.

The "simple case" scenario of using IVF to help infertile married couples was assessed in each of the 14 surveys that included questions on IVF. The approval rate for this use of the technology was already 77% in 1981. The high acceptance rate may have been related to Australia's success in producing the world's third IVF pregnancy (in 1980). The 8% fall in approval rating in the following year may have been related to adverse publicity about some of the more contro-

versial aspects of IVF (eg, discarding excess embryos).<sup>4</sup> Support for IVF steadily increased over the following decade to reach 86% in 2001. The increase may be related to the frequent discussion of reproductive technologies in the media and to the fact that nearly two out every 100 babies born in Australia are now conceived by IVF.<sup>9</sup>

To our knowledge, our serial-survey approach to assessing community attitudes to a new medical technique is unique. Our study was restricted by our inability to examine all aspects of IVF at each survey interval, as we were limited by the availability of survey "space" at various times.

Our data confirm the community's approval of IVF technology and of the government's policy of regarding infertility as a "medical" condition and hence providing Medicare rebates for IVF procedures.

## COMPETING INTERESTS

As Chairman of the Roy Morgan Research Centre Pty Ltd, Gary Morgan has a financial interest in the RMRC.

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