BMJ Open Quality

Closing the gap: actualising shared decision-making through effective medication abortion patient follow-up care

Erin Fagot

To cite: Fagot E. Closing the gap: actualising shared decision-making through effective medication abortion patient follow-up care. *BMJ Open Quality* 2020;9:e000740. doi:10.1136/bmjoq-2019-000740

➤ Additional material is published online only. To view please visit the journal online (http://dx.doi.org/10.1136/bmjoq-2019-000740).

Received 7 June 2019 Revised 16 February 2020 Accepted 1 March 2020

ABSTRACT

Background Effective care dearth in USA healthcare systems can be augmented by patient engagement and shared decision-making (SDM). These effective care strategies can facilitate medical abortion follow-up care (ensuring patients are not experiencing a continuing pregnancy) and follow-up options access.

Local problem The quality improvement project clinic had a state-mandated waiting period, requiring additional visits. This delayed care for all abortion patients, creating travel, and cost barriers. The clinic had some of the lowest medical abortion follow-up rates out of its entire national network.

Methods Four 'Plan-Do-Study-Act' (PDSA) cycles built on clinical changes, implementing an Agency for Healthcare Research and Quality serum human chorionic gonadotropin guideline. Medical abortion patient cohort size doubled during each PDSA cycle.

Interventions Through four interventions (team engagement, patient engagement, Beta follow-up and contraception SDM), standardised follow-up care was integrated into clinic workflow with contraception SDM tools and an Option Grid.

Results Most intervention measures were successful, with staff offering follow-up options counselling to all medical abortion patients by the end of the project. The Beta follow-up rate (84%) was higher than the overall follow-up rate (52%–73%), but the goal of a 92% overall follow-up rate was not met. Contraception SDM streamlined counselling but long-acting reversible contraception insertion rates did not increase.

Conclusions Effective care enabled the majority of medical abortion patients to choose Beta follow-up as their preferred follow-up method, especially those with a travel barrier. Beta follow-up gives assurance to close the follow-up gap over time.

A fundamental dearth of effective care, with medical resources and preference-sensitive care being misused, is seen in healthcare across the USA.¹ Shared decision-making (SDM) and patient engagement can be used as effective care strategies, but this often can be multifaceted and difficult to implement in healthcare settings.^{2 3} Induced abortion occurring at 12 weeks or less gestation is one of the safest medical procedures, with

less than 0.05% of complications warranting hospitalisation.⁴ Mifepristone–misoprostol combinations comprise 45% of US abortions at 9 weeks or less gestation with a 0.4%–3% fail rate.⁵ Barriers associated with travel and cost disproportionately impact abortion access nationwide and follow-up methods measuring serum human chorionic gonadotropin (hCG) can alleviate these time-sensitive barriers.⁵⁷⁻⁹ An essential part of medical abortion patient care effectiveness is unrestricted access to follow-up care options.¹⁵

Legislation in effect at the time of this quality improvement (QI) project requisitioned a 48 hours waiting period after an in-person consultation with a physician, adding the barrier of an additional visit for all patients seeking abortion care. 10 Baseline chart audits revealed more than 50% of the clinic's abortion patient population chooses medical abortion and 30% of the clinic's medical abortion patient population had a travel barrier (defined as living at least 50 miles away from the clinic). These audits showed the nadir of medical abortion follow-up rates in the clinic to be 52% before QI project implementation, some of the lowest out of a national network of over 650 clinics. Closing this follow-up gap is a clinical priority.¹¹

AVAILABLE KNOWLEDGE

In a study of 622 patients, cost was identified as the most common reason for a delay in abortion care, with cost increasing proportionately to gestational age. The standard of medical abortion follow-up care is centred on evaluating patients for a continuing pregnancy. In a systematic review of 393 articles, hCG testing was just as efficacious as transvaginal ultrasound (TVUS) in detecting a continuing pregnancy when coupled with a standardised phone call. Before the advent of the waiting period, most abortion care could be rendered in one visit at the clinical site.



Check for updates

© Author(s) (or their employer(s)) 2020. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

Frontier Nursing University, Hyden, Kentucky, USA

Correspondence to

Dr Erin Fagot; erin.fagot@frontier.edu



The waiting period made visit volume double and started when patients received physician consultation was known as the 'first day' visit. When patients were able to return to the clinic to receive abortion care, this was known as a 'second day' visit. Second day visits were being scheduled 2-3 weeks out from first day visits due to this increase in visit volume, inevitably increasing gestational age for all abortion patients. Clinic policy was based on the Agency for Healthcare Research and Quality 'Medical Management of First-Trimester Abortion' but was not being used, with TVUS being offered as the sole method of follow-up. 13 SDM is a patient-focused dialogue driven by healthcare workers to facilitate patients making informed choices in their own healthcare.² By offering TVUS as the only option for follow-up, SDM was not occurring for medical abortion patients and created a barrier of having to travel to the clinic for a third non-billable visit, circumventing preference-sensitive care.^{1 5} Patients who followed up using the hCG testing had their blood drawn the same day as mifepristone administration (during the second day visit). A second lab draw 7-10 days later that was less than 80% from the initial draw was considered a 'complete' abortion. 14 Lab orders for the second lab draw could be sent to a network of outpatient laboratories.

RATIONALE

SDM and patient engagement are inter-related effective care strategies and were incorporated into clinical practice to operationalise serum hCG testing (referred to as 'Beta follow-up'). Effective care strives to reduce variation in healthcare settings through addressing overuse, underuse and misuse of care. Effective care in this medical abortion setting focused on established preference-sensitive patient care while reducing overuse of TVUS and return visits for patients through offering follow-up options. The patient engagement element of effect care shifts patients to the centre of their care through addressing the Institute for Healthcare Improvement triple aim for improving health system performance: improving patient experience of care, improving health of populations and lowering healthcare costs. Systematic clinical changes

were needed to offer follow-up options for the first time through SDM as an effective care strategy. By the end of a 90-day implementation period, abortion patients would have access to effective care through integration of patient engagement and follow-up options counselling into current clinical systems. Follow-up rates will increase by 40% through implementation and standardisation of follow-up procedures.

METHODS

The QI project clinical site was a high-volume ambulatory clinic in an urban setting in a southeastern state where 86.9% of abortions occur at 10 weeks or less gestation (the gestational age limit at the time for medical abortion). The clinic was one of seven facilities in the state offering abortion services and was run by a small staff that experienced frequent turnover. Abortion clinic services were provided by an intraprofessional group of clinical staff, consisting of physicians, women's health nurse practitioners, registered nurses, medical assistants and medical receptionists.

INTERVENTIONS

The QI project was designed to integrate the Beta follow-up option into clinical staff workflow. Through four 2-week "Plan-Do-Study-Act" (PDSA) cycles, four interventions were prioritised for improvement: team engagement, patient engagement, Beta follow-up and contraception SDM (table 1). Clinical staff evaluated information from process-mapping and patient-tracer exercises to integrate interventions into first-day and second-day visits while considering abortion patient perspectives. Daily team engagement trainings and briefs were held throughout each PDSA cycle to introduce and refine new skills and workflow methods clinical staff were learning from the Beta follow-up and contraception SDM interventions. Necessary modifications were integrated into each intervention through cumulative tests of change before expanding clinical changes to larger patient cohorts. Tests of change determined where to integrate tools into

Table 1 Plan-Do-Study-Act (PDSA) cycles 'tests of change' interventions							
Interventions	PDSA cycle 1	PDSA cycle 2	PDSA cycle 3	PDSA cycle 4			
Team engagement	Kickoff meeting	Start one-on-one trainings	Add: ▶ 60 s briefs ▶ Step-by-step tools	Add: lab draw 'tackle box'			
Patient engagement	DNP student present 2 days w/ Option Grid	DNP student present 4 days w/ laminated Option Grid	DNP student present 6 days w/laminated Option Grid	DNP student present on (all) 8 days w/ laminated Option Grid			
Beta follow-up	Start offering Beta follow-up method	Add: standardised phone calls	Add: provider oversight documentation	Add: missed lab draw reminder phone calls			
Contraception SDM	Give LARC checklist during check-in	Add: contraception SDM tool	Tools available in ultrasound and counselling	Develop LARC checklist tools for EHR			

DNP, Doctor of Nursing Practice; EHR, Electronic Health Record; LARC, long-acting reversible contraception; SDM, shared decision-making.



interventions during each PDSA cycle in order to consolidate follow-up options counselling and contraceptives counselling for all abortion patients (including surgical abortion patients). QI tools used include: a modified 'Current Status of Group Cohesion' (CSGC) scale, 'step-by-step' tools, a lab draw 'tackle box', a modified Option Grid, a contraception SDM tool and a long-acting reversible contraception (LARC) checklist. ¹⁶ 17

STUDY OF THE INTERVENTIONS

Chart auditing, a case management log, and tracking spreadsheet documents (via Google Sheets) were used to record data in daily to weekly increments. Five spreadsheet tracking document tools were used to record and prioritise all pertinent data quantifiable for evaluation via run chart generation and interpretation. All tools informed what tests of change needed to be implemented before the beginning of each PDSA cycle and were designed to be used by clinical staff.

MEASURES

Four outcome and four process measures were evaluated during each PDSA cycle, with one measurement type associated with each intervention. The purpose of these measures was to bring effective care to the clinic

by introducing preference-sensitive care with follow-up options and decrease costs by reducing unnecessary ultrasound visits. Team engagement measures evaluated if clinical staff meeting attendance averages and CSGC scale scores would increase 25% from baseline. Patient engagement measures focused on the standardisation of clinic processes for follow-up options counselling and for patients who chose Beta follow-up to return for their laboratory draws by at least 75%. The Beta follow-up measures evaluated: if patients who received laboratory draws had documentation of reminder phone calls, standardised phone calls and provider oversight 100% of the time; if offering follow-up options counselling would become operational for all medical abortion patients and if the overall follow-up rates for these patients would increase by 40%. Contraception SDM measures aimed for the entire abortion patient population to be screened with the contraception SDM tool and LARC checklist and if LARC insertion rates for this patient population would increase by 20% from baseline (table 2).

ANALYSIS

The CSGC scale used a four-point Likert scale, which was averaged to generate individual and group scores. Spreadsheet documents tracked CSGC scores and averages of

Table 2 Aim statement, balancing measure, interventions, operational definitions and resu				
13hlo 2 / Nim etatement halancing meacure interventions operational definitions and recu				

Aim: by the end of a 90-day implementation period, medical abortion patients will have access to effective care through improving patient engagement with implementation of follow-up options counselling and standardisation of follow-up procedures, increasing follow-up rates by 40%.

Interventions	Operational definitions	Results
Team engagement	Staff meeting attendance/all staff members	Meeting attendance: mixed results. 2/4 (50%) meetings met 75% attendance goal. Attendance ranged from 73% to 79%.
	The mean score on the CSGC scale will increase by 25%.	CSGC: 3.14 goal not met. Group CSGC scores ranged from 2.51 to 2.69. Six individual scores achieved ≥3 throughout the project.
Patient engagement	Medical abortion patients screened with Options Grid/all medical abortion patients	Option Grid: goal met, 150/150 (100%) patients screened. Option Grid used on all counselling days at end of implementation.
	Medical abortion patients choosing Beta follow-up/All medical abortion patients	Beta follow-up: goals met. Out of 77 patients: 38 chose Beta follow-up, 14 did not receive mifepristone, 52 came for first lab draw, and 47 came for second lab draw.
Beta follow-up	Medical abortion patients receiving standardised phone call/all medical abortion patients choosing Beta follow-up	Standardised phone call: goals met. 21 patients required/had documentation of standardised phone calls, 3 needed/received reminder phone calls and 21 required/had provider oversight.
	Medical abortion patients who complete follow-up/all medical abortion patients	Overall follow-up rate: goal not met. Out of 63 patients choosing Beta follow-up: 21 completed follow-up, 4 were lost to follow-up and 38 were pending lab draws.
Contraception SDM	Patients screened with tools/all abortion patients	Screening with contraception tools: mixed results. 440/450 (98%) patients screened with tools.
	Patients receiving subsidised LARC/ patients qualifying for subsidised LARC	Patients receiving subsidised LARCs: goal not met. 9/115 (8%) (estimated) qualified patients had a LARC device inserted.
Balancing measure: unpaid DNP student time	Unpaid DNP hours spent in clinic/desired time spent in clinic	Unpaid DNP student time: 38% of DNP student shifts met ≤4 hours/day goal. 195 hours DNP student shifts spent in clinic (exceeding 100 hours goal).

CSGC, Current Status of Group Cohesion; LARC, long-acting reversible contraception; SDM, shared decision-making.

meeting attendance rates and patient no-show rates. The spreadsheet documents tracked patient data by using '0' for patients not coming to visits or not receiving steps in care and '1' as coming to visits or completing steps in care. Run charts with intervention measures data were evaluated for patterns including shifts, trends, runs and astronomical points. 18 Patients who did not return for abortion care or changed their mind regarding follow-up care (deciding to receive an ultrasound after choosing Beta follow-up) were accounted for but omitted from the Beta follow-up data set in order to calculate the follow-up rate for those who chose Beta follow-up and overall medication abortion follow-up rate. The Frontier Nursing University Institutional Review Board did not review this project because it met the federal requirements for QI and did not qualify as human subjects research.

RESULTS

By the end of a 90-day implementation period, medical abortion patients were able to have access to effective care through improving patient engagement, follow-up options counselling and standardised follow-up procedures. Patients choosing Beta follow-up had higher rates of follow-up than those who chose ultrasound, but the overall medical abortion follow-up rate remained the same throughout implementation. Clinical staff were able to use SDM and patient engagement strategies in order to provide effective medical abortion patient care, alleviating barriers.

TEAM ENGAGEMENT

Patient perspectives of abortion visits were reproduced on a large poster during the first PDSA cycle 'kickoff' meeting. Each PDSA cycle had an equivalent meeting, as team engagement trainings were added to each PDSA cycle (table 1). After a Clinical Laboratory Improvement Amendments inspection enabled training all clinical staff in drawing blood, enough staff who were trained in the Beta follow-up process could be scheduled for each shift by the end of implementation. Clinical staff meeting attendance and CSGC scale scores plateaued throughout each PDSA cycle (table 2).

PATIENT ENGAGEMENT

Patients reported during tracer exercises feeling 'overwhelmed' with information during first-day visits (when abortion education, ultrasound, contraceptives counselling and a physician consult occur). Clinical staff used the Option Grid to counsel patients who chose medical abortion about follow-up options during each PDSA cycle (online supplementary figure 1). By the second PDSA cycle, laminated copies of the Option Grid were designated in each abortion counselling room (table 1). Rates of medical abortion patients receiving their first hCG laboratory draws were inter-related to long-established patterns seen in second-day abortion visit no-show rates.

Of those who chose Beta follow-up, 83% received their first laboratory draw, and 75% received their second laboratory draw (table 2). Patient cohorts screened with the Option Grid doubled in each subsequent PDSA cycle until all medical abortion patients were offered follow-up care options by the end of implementation (table 2). When the Beta follow-up option was made available to patients, 100% of patients were screened with the Option Grid. Out of all medical abortion patients who were offered follow-up care choices, 52% selected Beta follow-up (online supplementary figure 2). Of the patients who chose the Beta follow-up option, 50% had a travel barrier. Patients who qualified received reimbursement of travel expenses and/or the cost of the abortion procedure when they presented for care. This reimbursement was provided by private donations made to the National Network of Abortion Funds or a smaller, local abortion fund operated by the clinic.

BETA FOLLOW-UP

Patients had documentation of reminder phone calls, standardised phone calls and provider oversight 100% of the time (table 2). Before the QI project began, the overall medical abortion follow-up rate ranged from 52% to 73%. A goal of a 92% overall follow-up rate was based on a goal set for a 40% increase from the nadir. The follow-up rate was higher for those who completed the Beta follow-up option (84%) than the highest point of the baseline overall medical abortion follow-up rate (73%). During the 8-week implementation period, the median overall follow-up rate for medical abortion patients was 66%. A goal of 92% was not met by the end of the implementation period (online supplementary figure 3).

CONTRACEPTION SDM

By the end of the implementation, the contraception SDM tool and LARC checklist were offered to the entire abortion patient population and filled out 98% of the time. The abortion patient population LARC insertion rate did not increase 20% from baseline (table 2). Insertion rates were directly influenced by the no-show rate for these appointments, averaging 67% before and 61% during the QI project. Evaluation of the programme that subsidised LARC insertion revealed that no one was collecting patient data related to this programme outside of no-show rates. By the end of implementation, an interactive LARC checklist in the EHR to document patients who could receive free LARC insertion was in development but not operational.

DISCUSSION

Effective care was achieved through successful improvement of patient engagement, introduction of follow-up options counselling and standardisation of follow-up procedures. The Beta follow-up method was chosen more often than ultrasound and was chosen half the time by



medical abortion patients with a travel barrier. Clinical changes regarding team engagement, patient engagement, Beta follow-up and contraception SDM were solidified into clinical practice. Throughout the QI project, the overall medical abortion follow-up rate did not change. The Beta follow-up option had a smaller lost to follow-up rate than patients who chose ultrasound. The overall medical abortion lost to follow-up gap will become smaller over time if this trend continues.

INTERPRETATION

Patients who chose Beta follow-up were able to obtain laboratory draws in their community, reducing the necessity of travelling for in-person clinic visits. Medical abortion patient SMD was facilitated by an Option Grid. Contraception counselling was the longest portion of patient visits and was streamlined by contraception SDM tools made available during patient downtime before this counselling occurred. QI project SDM and patient engagement brought effective care to the clinic through offering outside laboratory draws and contraception SDM tools to the clinic's family planning population. The follow-up rate was higher for those who completed the Beta follow-up option (84%) than the highest point of overall medical abortion follow-up rate (73%). The median of the overall follow-up rate (66%) did not reach the stated goal of 92% for medical abortion patients by the end of implementation.

LIMITATIONS

Abortion patient populations have a set of unique and complex needs that are dependent on: geographical location, state and federal law, abortion stigma, proximity to abortion care providers, childcare needs, time off from work and social support systems. Therefore, the generalisability of this QI project is also dependent on the needs of the given abortion patient population that is directly influenced by these outside forces. Approximately 25% of the clinic's patient population were out-of-state residents and experienced significant travel barriers. ¹⁵ All QI project outcomes were directly influenced by legislative restrictions on abortion, which created constitutionally suspect barriers for the patient population to access abortion care (TSG, 2015). ¹⁰

CONCLUSIONS

Effective care strategies facilitated medical abortion follow-up options and contraception SDM, including using the Option Grid and contraception SDM tool in patient counselling. Beta follow-up was more popular among medical abortion patients (including those with a travel barrier), and fewer patients were lost to follow-up than those who chose ultrasound follow-up. Effective care measures were met through improvement of patient engagement, introduction of follow-up options counselling and standardisation of follow-up procedures.

The overall medical abortion follow-up rate remained the same throughout implementation, but the addition of the Beta follow-up option assures to narrow this gap over time. Introducing Beta follow-up in a rural clinic was in development by the end of implementation. The Beta follow-up process can be adapted for other settings serving medical abortion patient populations, widening access to safe and effective abortion care. This QI project received no outside funding and reports no conflicts of interest.

Acknowledgements EF would like to acknowledge: Planned Parenthood of Middle and East Tennessee for hosting the QI project; Jessica Young (Vanderbilt University), who acted as the QI project's clinical site mentor; Ashley Greer, WHNP and Kat Ewing, RN, who served as clinical site sponsors; Diana Jolles (Frontier Nursing University), who acted as faculty advisor; and Joani Slager (Frontier Nursing University), who acted as clinical course faculty; Barbie Carpenter, who acted as copy editor; and all abortion and family planning clinical staff. This work is dedicated to those seeking abortion care and to those who help patients access safe and compassionate abortion care.

Contributors EF acted as guarantor, who designed and conducted the QI project. She completed all medical abortion patient care related to the QI project. She trained clinical supportive staff to draw blood and to use established web-based clinical resources to integrate aspects of the QI project into clinical practice. She organised and led daily briefings with clinical and supportive staff; conducted five interactive meetings with clinical and supportive staff; adapted and administered a team engagement survey; developed two patient contraceptive screening tools, and adapted an "Option Grid" for screening patients for medical abortion follow-up care options.

Funding No funding was provided for the QI project. EF spent approximately 195 hours of unpaid time as a women's health nurse practitioner and doctoral candidate to complete the QI project.

Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement All data relevant to the study are included in the article or uploaded as supplementary information.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/.

REFERENCES

- 1 Dartmouth Atlas Project. A Dartmouth atlas topic brief: effective care. Lebanon (NH): Dartmouth College, 2007. http://www.dartmouthatlas. org/downloads/reports/effective_care.pdf
- 2 Elwyn G, Lloyd A, Joseph-Williams N, et al. Option grids: shared decision making made easier. Patient Educ Couns 2013;90:207–12.
- 3 Institute for Healthcare Improvement. An overview of the IHI triple aim [web streaming video]. Boston (MA): Institute for Healthcare Improvement, 2017. http://www.ihi.org/Engage/Initiatives/TripleAim/ Pages/default.aspx
- 4 Guttmacher Institute [Internet].. Fact sheet: induced abortion in the United States. Washington, DC: Guttmacher Institute, 2017. https:// www.guttmacher.org/fact-sheet/induced-abortion-united-states
- 5 Grossman D, Grindlay K. Alternatives to ultrasound for follow-up after medication abortion: a systematic review. Contraception 2011;83:504–10.
- 6 Jones RK, Jerman J. Abortion incidence and service availability in the United States, 2014. Perspect Sex Reprod Health 2017;49:17–27.
- 7 Jones RK, Jerman J. How far did U.S. women travel for abortion services in 2008? *J Womens Health* 2013;8:706–13.



- 8 Jones RK, Upadhyay UD, Weitz TA. At what cost? payment for abortion care by U.S. women. Women's Health Issues 2013;23:e173–8.
- 9 Roberts SCM, Gould H, Kimport K, et al. Out-Of-Pocket costs and insurance coverage for abortion in the United States. Women's Health Issues 2014;24:e211–8.
- 10 Tennessee State Government. "Amendment No. 1" to article I of the Tennessee constitution. Nashville (TN): Tennessee State Government, 2015. https://www.tn.gov/content/dam/tn/attorneygeneral/ documents/ops/2015/op15-13.pdf
- 11 Perriera LK, Reeves MF, Chen BA, et al. Feasibility of telephone follow-up after medical abortion. Contraception 2010;81:143–9.
- 12 American College of Obstetricians and Gynecologists. Practice bulletin No. 143: medical management of first-trimester abortion. *Obstet Gynecol* 2014;123:676–92.
- 13 Agency for Healthcare Research and Quality. National guideline Clearinghouse summary: medical management of first-trimester abortion. Rockville (MD): Department of Health and Human Services,

- 2014. https://www.guidelines.gov/summaries/summary/47829/medical-management-of-firsttrimester-abortion?q=medication+abortion
- 14 Dayananda I, Maurer R, Fortin J, et al. Medical abortion followup with serum human chorionic gonadotropin compared with ultrasonography: a randomized controlled trial. Obstet Gynecol 2013;121:607–13.
- 15 Centers for Disease Control and Prevention. Abortion surveillance -United States, 2013. MMWR Morb Mortal Wkly Rep 2013;44:1–44.
- 16 Option Grid. Decision AIDS: melanoma: follow-up with regular CT scans yes or no? Lebanon (NH): Dartmouth College, 2015. http://optiongrid.org/option-grids/grid-landing/63
- 17 Treadwell T, Lavertue N, Kumar VK, et al. The group cohesion scale-Revised: reliability and validity. International Journal of Action Methods: Psychodrama, Skill Training, And Role Playing 2001;1:3–12
- Methods: Psychodrama, Skill Training, And Role Playing 2001;1:3–12.

 18 Ogrinc GS, Headrick LA, Moore SM, et al. Fundamentals of health care improvement: A guide to improving your patients' care. 2nd edn. Oakbrook Terrace (IL): Joint Commission Resources, 2012: 97–119.