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THE HEART TEAM REVIEW

Shared Decision Making in the Heart Team: Current Team Attitudes and Review

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Abstract

This heart team review gives an overview of the current status of SDM in heart teams, and investigates the perceived needs for implementation of a SDM approach in clinical practice through an exploratory cross-sectional survey (N=101) and in-depth interviews (N=9) among an international community of heart team physicians specialized in HVD. Although heart team physicians agree on the importance of involving patients in heart team treatment decisions, half leaned toward the heart team making final decisions. In addition, limited understanding of the concept of SDM poses another barrier for physicians in involving patients in their own clinical practice. Finally, limited knowledge of and experience with the use of evidence-based decision aids is hampering wider implementation of SDM in clinical practice. The perceived needs and requirements for implementation of SDM according to heart team physicians forecast a long and winding road forward to sustainable implementation of SDM in heart teams. However, directly addressing attitudes, skills and tools may pave the way to effective implementation of SDM in heart teams. In conclusion, SDM is a means to improve care delivery for patients with HVD. Barriers exist for successful implementation by heart teams, yet opportunities arise as the culture shifts to physicians supporting patient engagement in decision making.

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KEYWORDS Shared decision-making; clinical decision making; heart valve disease; heart team

A 72-year-old retired physician living independently presents with shortness of breath on exertion. She is found to have severe aortic stenosis and two-vessel coronary artery disease. Both are amenable to a surgical and transcatheter approach.

Heart valve disease (HVD) patients like the one above, facing an array of potential treatment options, are often encountered by the Heart Team. These types of decisions are ideally driven by an approach termed shared decision making (SDM): a bidirectional exchange of information between physicians and patients, distinct from the one-way stream of information in patient education or informed consent.[1] However, this approach has not received wide application, perhaps due to a lack of understanding and/or support by Heart Team members. In this article we explore Heart Team attitudes to shared decision making by Heart Team members, review the current status of shared decision making (SDM) for HVD, and consider the requirements for implementation of a SDM approach in clinical practice.

Definition and current status of SDM in Heart Teams

As defined by the National Learning Consortium, SDM is a key component of patient-centered health care. It is a process in which clinicians and patients work together to make decisions and select tests, treatments and care plans based on clinical evidence that balances risks and expected outcomes with patient preferences and values. SDM should not be confused with informed consent, which is the legal process used to promote patient autonomy. In the informed consent process, a physician presents information about anticipated management, detailing benefits, risks, and alternatives, and seeking the patient's yes or no decision as to how to proceed. SDM, on the other hand, is a widely promoted ethical approach, in which patients' goals and preferences are central to the process. Clinicians share information about the alternatives, benefits and harms for management. The unique patient facing the decision shares in their own words prior experiences, expectations, values, and goals.[2] The patient and physician interact to reach the best decision for the patient management. Best practices of SDM recommend the use of a patient decision aid (DA) to guide the conversation.[3]

The American College of Cardiology/American Heart Association clinical practice guidelines recommend that treatment decisions for HVD utilize a Heart Team approach, SDM process, and incorporate patient values and preferences.[4] The European Society of Cardiology/European Association for Cardio-Thoracic surgery guidelines reference the importance of informed patient preference for prosthetic valve selection.[5] There are both opportunities and challenges in implementing SDM, driven in part by the rapid evolution of the field of HVD and an increasing number

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of options for a wide range of patients (i.e. transcatheter vs. surgical valve replacement).[6]

Adoption of SDM into routine HVD practice has been remarkably slow. Although SDM is increasingly recommended[4,5] and literature supports added value in terms of improved patient outcomes (patient knowledge, decisional conflict and satisfaction), the implementation of SDM for HVD patients is still in its infancy.[7] Heart Team physicians continue to make inaccurate assumptions about patient values and preferences, particularly in a medical culture that is focused on a "disease-outcome-based paradigm".[8] Although Heart Team physicians often feel they already perform SDM, SDM is rarely practiced in real-world decision making between physicians and their patients.[9] Research also suggests that clinicians often confuse basic patient education with an SDM process.[10]

DAs are information tools designed to help patients make informed choices about health care options based on their values and preferences.[11] Currently, publicly available DAs for patients with aortic stenosis exist, created through cardiovascular professional societies and grant-funded efforts.[12] DAs and values clarification exercises however are infrequently employed.[10,13] Although DAs are important, professional skill sets in SDM and favorable physicians' attitudes are even more critical for successful implementation of SDM.[14]

There is little evidence that Heart Team physicians have the inclination or skillsets to lead patients and their families in an SDM process. In fact, published data suggest that individual physicians continue to have difficulty implementing SDM in real-word practice, supporting the importance of additional training tools embedded in the clinical workflow. Moreover, it was suggested that policies that encourage favorable attitudes and a supportive context leading to SDM among physicians would be of benefit.[15] A recent study of SDM in patients with severe aortic stenosis found that Heart Team physicians perceive that patients have poor understanding of DAs despite patients' reports that SDM with DAs improved their knowledge and the quality of clinical encounters.[1] Taken together, it appears that physicians' attitudes toward SDM and DAs remain limited, which would render implementation unlikely.[1]

Barriers and facilitators to SDM have been mainly identified from patients' perspectives.[15,16] The most frequently identified barrier for patients is insufficient information support ("too little" or "unimportant").[2,16] An appropriate level of knowledge is important as this is the principal enabler of SDM.[14] Comorbidities are also frequently mentioned as a barrier to SDM, and one which influences symptom interpretation and expectations.[17,18] On the other hand, comorbidities are also seen as a facilitator by making patients more "experienced", as they rely on their medical history, comparison with past significant medical experiences and ongoing medical management.[17,19]

In summary, despite recommendations in professional guidelines, SDM is not yet common practice in the Heart Team decision-making process in the treatment of HVD patients. While the role of the Heart Team physician is likely central in the lack of SDM implementation, in the current literature, attitudes and perceived barriers and facilitators among Heart Team physicians remain underexplored. These data are essential to understand effective strategies for implementation of SDM (e.g. awareness, familiarity, agreement with SDM, factors associated with patients and environment).[13] To match the dramatic evolution of the advancements in treatment, further research is needed to implement HVD SDM.

Physician practice and attitudes in HVD SDM

The variable alternatives for management of HVD present a prime example of a clinical condition in which SDM could play a critically important role. To explore and further define the knowledge, attitudes and needs of Heart Team clinicians caring for HVD patients, we invited registrants for the 2018 Annual Scientific Meeting of the Heart Valve Society to share opinions about SDM and their perceived requirements for implementation in clinical practice. Heart Team physicians, including cardiologists and cardiothoracic surgeons, were approached by e-mail and asked to complete an anonymous online survey (Appendix 1) before attending the meeting (N = 800) using a cross-sectional online survey (Poll Everywhere). We also performed in-depth interviews. Given that patients were not included in this project, institutional review board approval was not sought. All interviewed participants provided informed consent and interviews were anonymized.

Attitudes toward and Requirements for SDM

Using the clinical scenario of the 78 year old retired physician with treatment equipoise, varying physicians' practice patterns were reported (Figure 1). Almost all physicians (91%) indicated that they would take additional steps to achieve patient engagement in the decision making process if the patient indicated

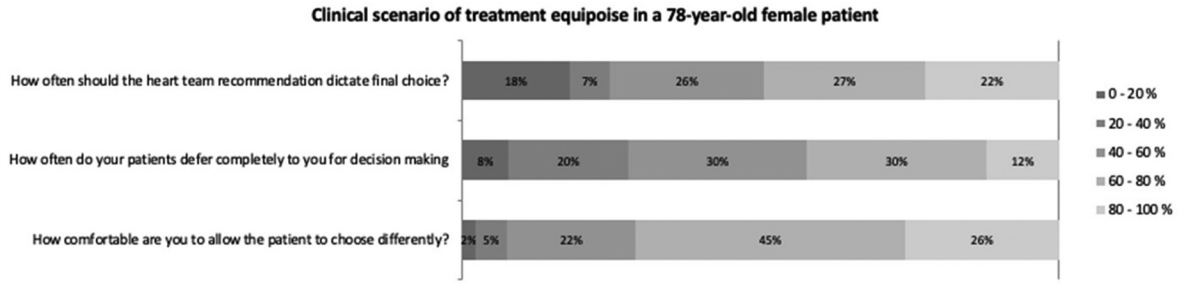

Figure 1. Heart Team physicians' experiences with shared decision-making in relation to the clinical scenario of the 78-year-old patient (N = 101).

a preference to leave the decision entirely to the physicians. Less than half of the physicians reported using evidence-based DAs (43%), while 48% indicated they typically take further actions to engage patients through verbal communication. No correlations between attitude toward SDM and gender, age or specialty were found. Physicians who expressed a more positive attitude toward SDM also had a more positive view regarding the balance between SDM and healthcare costs. Physicians' answers to the requirements for consistent SDM implementation and the most important facilitators to SDM promotion are shown in Figures 2 and 3. The need for physician training and upper level support were emphasized.

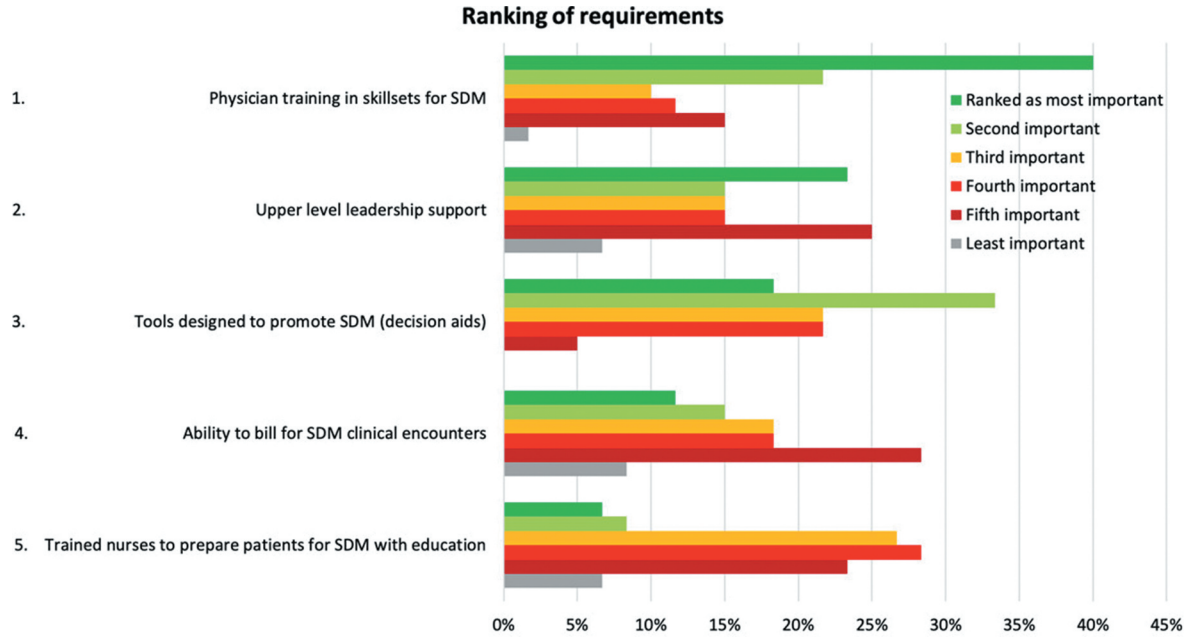

Figure 2. Heart Team physicians' responses to rank importance of requirements to effectively implement SDM in heart valve disease practice. The 5 answer options in the figure were ranked from most important at the top (dark green) to least important at the bottom (gray). The 6th answer option is "No changes are needed at all". The figure is arranged at number 1 position.

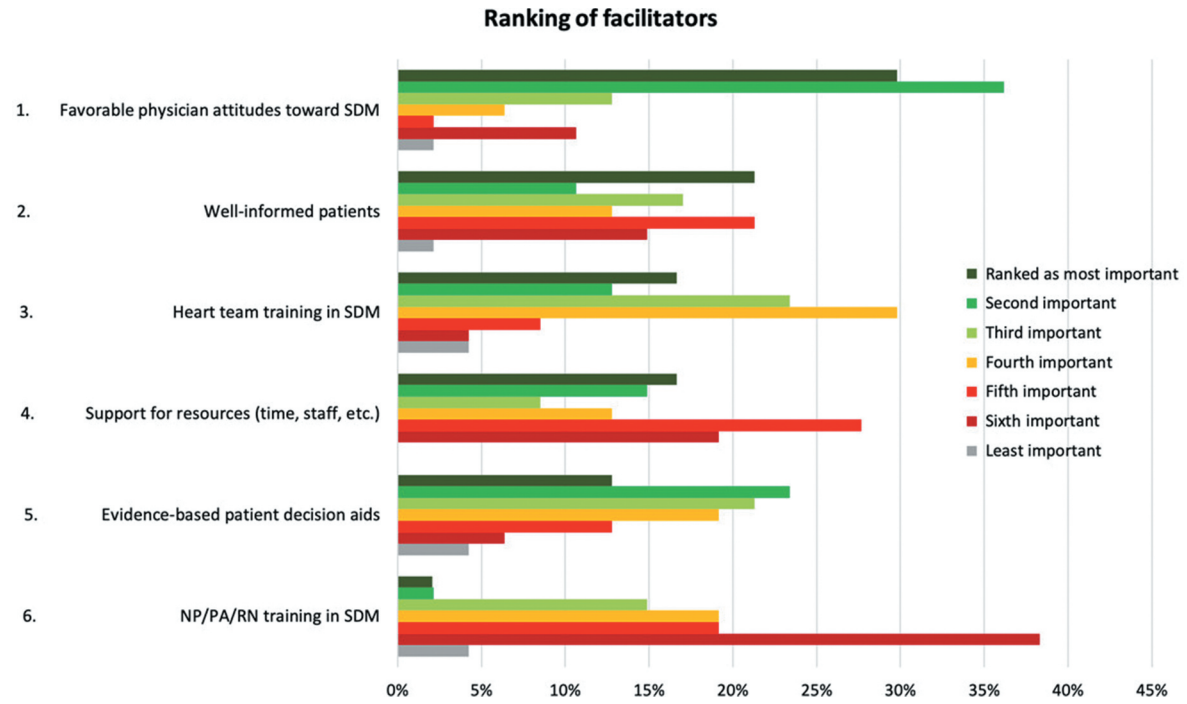

Figure 3. Heart Team physicians' responses to rank importance of facilitators to effectively implement SDM in heart valve disease practice. The 6 answer options in the figure were ranked from most important at the top (dark green) to least important at the bottom (gray). The 7th answer option is "No changes are needed at all". The figure is arranged at number 1 position.

Nine Heart Team physicians, including 4 cardiologists and 5 cardiothoracic surgeons, participated in interviews (see appendix 2) to gain an in-depth understanding of their perceptions toward the implementation of SDM in HVD practice. Five physicians claimed to be familiar with the concept of SDM but 3 of the 5 were unable to differentiate patient education from SDM. Given the small experience with SDM and use of DAs, the perception was that SDM is too time-intensive. Despite supporting the concept of SDM, it was considered impossible due to lack of consultation time. Most physicians agreed on the added value of DAs, however only 1 had ever used a DA. Most physicians expressed their interest for a straightforward and easy to use DA tool in their clinics and that information tools must be evidence-based. To effectively implement SDM, Heart Team physicians claimed it might be necessary to train them and other Team members in engaging patients in decision-making. The potential to overwhelm some patients with the SDM process was raised, but none had experience with asking patients about their desire to actively engage in the decision-making process by sharing values. When considering future benefits, the physicians agreed that a better-informed patient may save consultation time and could potentially improve the conversation.

The road forward

The results of this exploratory study forecast a long, winding road for HVD Heart Team physicians to adopt SDM into clinical practice. Although physicians agree on the importance of involving patients in treatment decisions, half leaned toward the Heart Team making final decisions. In addition, limited understanding of the concept of SDM poses another barrier for physicians in involving patients in their own clinical practice. Finally, limited knowledge of and experience with the use of evidence-based DAs is hampering wider implementation of SDM in clinical practice.

The primary limitation of this initial assessment is the introduction of bias due to its exploratory nature, convenience sample, small sample size, and low response rate. The patient scenario used in the survey also introduces bias as this patient was a retired physician. Further, physicians attending the Heart Valve Society meeting are frequently those with an academic focus, thus this sample may not be representative of other practice settings. A key strength of this initial assessment is the provision of new data to understand Heart Team physician perceptions of barriers and facilitators for HVD SDM.

Changing physicians' attitudes toward SDM

Changing attitudes is a key challenge for any change program. Both structural changes, in terms of healthcare pathways and delivery, and culture and attitudinal change among physicians are required for SDM to become routine. Thus, a positive clinician attitude toward SDM should be integrated into cardiovascular professional organizations, scientific sessions, and educational initiatives for heart teams. The mixed opinions among Heart Team members regarding the effect that SDM has on healthcare costs, reflect the existing literature.[18,20] Although there is no strong evidence that more time is required for SDM compared to usual healthcare delivery, this generally perceived barrier seems unavoidable.[21–23]

Improving Heart Team SDM skills

An essential step in implementing SDM is to increase understanding of what this ethical approach entails and how it differs from the legal process of informed consent.

Both the survey and interviews reveal that physicians value training in SDM skillsets as an important requirement. This is in line with prior literature, which suggests that strategies to implement SDM in clinical practice require training activities targeting a diverse group of health clinicians.[15] To achieve this, training sessions including the whole Heart Team are necessary to create collective commitment. For example, interactive skills training opportunities, based on building coherence, improving skills, and promoting positive attitudes.[24] In addition, role play-based training, which emphasize practical skills, worked better than theory heavy presentations.[13] For successful adoption, training would need to be embedded within the leadership and culture of prominent professional organizations, and within medical and nursing curriculums and interprofessional training program. This way, attitudes may shift from "We do it already" to "We can do this better".

Implementing tools (DAs)

Heart Team professionals value tools designed to promote SDM, like *DAs*, the question is how to do this effectively. Prior studies in cardiovascular care have emphasized the importance of DAs to promote SDM and demonstrated multiple benefits,[24,25] but implementation barriers at the clinician level are an important cause of underuse of DAs.[1] Recent studies support that in-consultation tools are often better in facilitating discussions between patient and clinician than those used outside the consultation. Currently, there are 3 publicly available DAs for patients with HVD.[12] These will help physicians to support and engage with SDM. However, the risk remains that physicians use brief DAs to enhance information transfer and talk at patients, rather than improving how they work with patients.[13] Given the rapid changes in the area of HVD, further evolution of DAs is likely needed before widespread adoption.

In conclusion, SDM is a means to improve care delivery for patients with HVD. Barriers exist for successful implementation by Heart Teams, yet opportunities arise as the culture shifts to physicians supporting patient engagement in decision making. Although we realize that our study was merely explorative and has several limitations, it seems that the road toward effective implementation of SDM in Heart Teams is paved by effectively changing physician attitudes toward SDM, improving SDM skills and implementing DAs.

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References

1. Coylewright M, O'Neill E, Sherman A, et al. The learning curve for shared decision-making in symptomatic aortic stenosis. *JAMA Cardiol*. 2020;5(4):442–448.doi:10.1001/jamacardio.2019.5719.
2. Whitney S, McGuire A, McCullough LA. Typology of shared decision making, informed consent, and simple consent. *Ann Intern Med*. 2004;140(1):54. doi:10.7326/0003-4819-140-1-200401060-00012.
3. Dharmarajan K, Foster J, Coylewright M, et al. The medically managed patient with severe symptomatic aortic stenosis in the TAVR era: patient characteristics, reasons for medical management, and quality of shared decision making at heart valve treatment centers. *PLoS One*. 2017;12(4):e0175926.doi:10.1371/journal.pone.0175926.
4. Nishimura R, Otto C, Bonow R, et al. AHA/ACC guideline for the management of patients with valvular heart disease: executive summary. *Circulation*. 2014; 129(23):2440–2492. 2014. doi:10.1161/cir.0000000000000029.
5. Falk V, Baumgartner H, Bax J, et al. ESC/EACTS guidelines for the management of valvular heart disease. *Eur J Cardiothorac Surg*. 2017; 52(4):616–664. 2017. doi:10.1093/ejcts/ezx324.
6. Sepucha K, Wasfy J. Implementing shared decision making in the rapidly evolving field of valvular heart disease. *Circulation*. 2017;10:2. doi:10.1161/circoutcomes.117.003549.
7. Coylewright M, Forrest J, McCabe J, Nazif T. TAVR in low-risk patients. *J Am Coll Cardiol*. 2020;75(10):1208–1211. doi:10.1016/j.jacc.2019.12.057.
8. Reuben D, Tinetti M. Goal-oriented patient care — an alternative health outcomes paradigm. *N Engl J Med*. 2012;366(9):777–779. doi:10.1056/nejmp1113631.
9. Godolphin W. Shared decision-making. *Healthcare Q*. 2009;12 (sp):e186–e190. doi:10.12927/hcq.2009.20947.
10. Coylewright M, Dick S, Zmolek B, et al. PCI choice decision aid for stable coronary artery disease. *Circulation*. 2016;9(6):767–776. doi:10.1161/circoutcomes.116.002641.
11. Stacey D, Légaré F, Lewis K, et al. Decision aids for people facing health treatment or screening decisions. *Cochrane Database Syst Rev*. 2017. doi:10.1002/14651858.cd001431.pub5.
12. Shared decision making. Tools. Available at: https://sharedcardiology.org/tools/ Accessed April 8, 2020.
13. Joseph-Williams N, Lloyd A, Edwards A, et al. Implementing shared decision making in the NHS: lessons from the MAGIC programme. *BMJ*. 2017;357:j1744. doi:10.1136/bmj.j1744.
14. Gravel K, Légaré F, Graham I. Barriers and facilitators to implementing shared decision-making in clinical practice: a systematic review of health professionals' perceptions. *Implementat Sci*. 2006;1:1. doi:10.1186/1748-5908-1-16.
15. Joseph-Williams N, Elwyn G, Edwards A. Knowledge is not power for patients: a systematic review and thematic synthesis of patient-reported barriers and facilitators to shared decision making. *Patient Educ Couns*. 2014;94(3):291–309. doi:10.1016/j.pec.2013.10.031.
16. Dua A, Dang P, Shaker R, et al. Barriers to surgery in severe aortic stenosis patients with class I indications for aortic valve replacement. *J Heart Valve Dis*. 2011;20:396–400.
17. Lytvyn L, Guyatt G, Manja V, et al. Patient values and preferences on transcatheter or surgical aortic valve replacement therapy for aortic stenosis: a systematic review. *BMJ Open*. 2016;6(9):e014327. doi:10.1136/bmjopen-2016-014327.
18. Montori V, Kunneman M, Brito J. Shared decision making and improving health care. *JAMA*. 2017;318(7):617. doi:10.1001/jama.2017.10168.
19. Olsson K, Näslund U, Nilsson J, Hörnsten Å. Patients' experiences of the transcatheter aortic valve implantation trajectory: a grounded theory study. *Nurs Open*. 2018;5(2):149–157. doi:10.1002/nop2.124.
20. Walsh T, Barr P, Thompson R, Ozanne E, O'Neill C, Elwyn G. Undetermined impact of patient decision support interventions on healthcare costs and savings: systematic review. *BMJ*. 2014;348 (jan23 2):g188. doi:10.1136/bmj.g188.
21. Wyatt K, Branda M, Anderson R, et al. Peering into the black box: a meta-analysis of how clinicians use decision aids during clinical encounters. *Implementat Sci*. 2014;9:1. doi:10.1186/1748-5908-9-26.
22. Elwyn G, Lloyd A, May C, et al. Collaborative deliberation: A model for patient care. *Patient Educ Couns*. 2014;97 (2):158–164.doi:10.1016/j.pec.2014.07.027.
23. Pieterse A, Stiggelbout A, Montori V. Shared decision making and the importance of time. *JAMA*. 2019;322(1):25. doi:10.1001/jama.2019.3785.
24. Elwyn G, Tsulukidze M, Edwards A, Légaré F, Newcombe R. Using a 'talk' model of shared decision making to propose an observation-based measure: observer OPTION5 item. *Patient Educ Couns*. 2013;93(2):265–271. doi:10.1016/j.pec.2013.08.005.
25. Coylewright M, O'Neill E, Dick S, Grande S, Choice PCI. Cardiovascular clinicians' perceptions of shared decision making in stable coronary artery disease. *Patient Educ Couns*. 2017;100 (6):1136–1143. doi:10.1016/j.pec.2017.01.010.