

## LETTER

# An opportunity for improvement: iPLEDGE policy changes during the coronavirus pandemic

Dear Editor,

iPLEDGE is a risk evaluation and mitigation strategy program created to reduce fetal exposure to isotretinoin due to its high risk of teratogenicity. However, iPLEDGE has failed to meet its primary aim, as there is a lack of evidence that the program reduces the incidence of fetal exposure to isotretinoin.<sup>1</sup> The iPLEDGE program has been additionally criticized for creating significant administrative burdens, causing delays and interruptions in isotretinoin therapy which disproportionately affect racial minorities and other socioeconomically disadvantaged groups.<sup>2</sup>

iPLEDGE has historically required patients with reproductive potential to obtain monthly pregnancy tests at a Clinical Laboratory Improvement Amendments (CLIA)-certified laboratory. In response to the coronavirus disease 2019 (COVID-19) pandemic, iPLEDGE has begun permitting telemedicine visits and the use of home pregnancy testing during isotretinoin therapy.<sup>3</sup> These practice changes may increase access to isotretinoin therapy and help avoid delays or interruptions in therapy, but require increased provider education regarding at-home pregnancy tests and careful review of any changes occurring in pregnancy data if they are to be continued post COVID-19.

Home urine pregnancy tests have variable sensitivity and require users to accurately interpret results. iPLEDGE had required CLIA-certified laboratory pregnancy tests to detect serum human chorionic gonadotropin (hCG) at 25 mIU/mL, which is the same hCG detection threshold for most home urine pregnancy tests (Table 1). However, independent evaluation of home pregnancy tests found that agreement between laboratory-determined and manufacturer-advertised accuracy ranged from less than 50% to greater than 90% by brand. Use of an accurate and reliable test can reduce error but all tests require user

interpretation.<sup>5</sup> Digital home tests are preferred by users and may address interpretation errors, but are more expensive (Table 1).<sup>5</sup> If use of home pregnancy tests during isotretinoin therapy is adopted post COVID-19, highly accurate and easily interpretable commercial tests will need to be identified along with guidelines for their use.

Despite challenges, home pregnancy testing is cost-effective and convenient. Patients report incurring indirect costs greater than \$25 due to lost wages from missed work or childcare associated with in-person care required during isotretinoin therapy.<sup>6</sup> Common at-home pregnancy tests range from \$0.30 to \$6.99 per test (Table 1) and represent an opportunity to reduce the potential cost barrier associated with in-person visits and monitoring required by iPLEDGE. Home pregnancy testing lends physicians greater autonomy in individualizing testing for each patient. While high-risk laboratory anomalies prompting a change in isotretinoin treatment are rare and raise questions about the need for frequent in-person nonpregnancy laboratory monitoring, providers with concerns about the sensitivity of at-home pregnancy tests who elect to monitor metabolic labs could add on a periodic serum pregnancy test.<sup>7</sup> Others have suggested decreasing the frequency of routine pregnancy testing for patients with tubal ligation and/or those using long-acting reversible contraception, such as implantable or intrauterine devices.<sup>2,8,9</sup> Perhaps in this group of patients, it would be most appropriate to consider continued home pregnancy testing post COVID-19.

Our specialty should work with iPLEDGE administrators to study the impact of new policies, including rates of pregnancy and attributable birth defects, the gestational age at time of positive test, test type used, and modality of patient-provider communication among

**TABLE 1** Comparison of common at-home pregnancy tests<sup>a</sup>

Pregnancy test	Collection method <sup>b</sup>	Cost per test <sup>c</sup> (\$)	hCG detection threshold (mIU/mL)	Advertised accuracy (%)	Interpretation required
Clearblue Rapid Detection	Stream	3.99	25	>99	Yes
AccuMed Strips	Dip	0.36	25	>99	Yes
Clearblue Digital	Stream	8.43	25	>99	No
First Response Rapid Result	Stream	6.99	Not available	>99	Yes
PREGMATE 50 Strips	Dip	0.30	25	>99	Yes
First Response Early Detection	Stream	6.99	6.3 <sup>4</sup>	>99	No

Abbreviation: hCG, human chorionic gonadotropin.

<sup>a</sup>Top five best selling at-home pregnancy tests on Amazon.com as of 17 May 2020 and First Response Early Detection Test.

<sup>b</sup>Collection methods include placing the test in urine stream while urinating or collecting urine and dipping the test strip into self-collected sample.

<sup>c</sup>Cost represents listed retail price without tax.

patients who become pregnant. Dermatologists should assess whether the use of telemedicine and home pregnancy tests increases access, adherence, and/or patient satisfaction with isotretinoin therapy, and whether the quality of care provided by telemedicine is equivalent to in-person evaluations. Updated iPLEDGE policies represent an opportunity to carry forward data-driven practice changes and have the potential to increase access and improve health equity without sacrificing quality of care or patient safety.

#### CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

#### AUTHOR CONTRIBUTIONS

All authors contributed equally to the conception, design, and writing of the letter.

#### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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