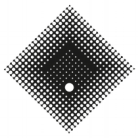

Perceptions of Australian osteopaths on the use of telehealth for patient care: Barriers and enablers for implementation

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Perceptions of Australian osteopaths on the use of telehealth for patient care: Barriers and enablers for implementation

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A B S T R A C T

Background: Telehealth is increasingly becoming a significant strategy for the delivery of healthcare in Australia in a wide range of professions. Recent physical distancing requirements were a catalyst for professions such as osteopathy (where the dominant care model is manual therapy) to make significant changes to adapt their approach for telehealth platforms.
Objective: To explore the perceptions of Australian osteopaths' use of telehealth for patient care, and the associated barriers and enablers of its implementation.
Methods: The Theoretical Domains Framework informed the development of semi-structured interviews which were conducted with osteopaths. Transcriptions were analysed thematically.
Results: Nine osteopaths participated in semi-structured interviews. They described their beliefs about osteopathy and the challenge telehealth has posed to their professional identity as healthcare providers. Osteopaths described uses ranging from simply staying connected with patients, through to innovative ways to assess and teach patients how to self-treat and self-manage their conditions.
Conclusion: Enablers for the use of telehealth by participating osteopaths were face-to-face practice restrictions imposed during the pandemic lockdown and acknowledgement of the potential for telehealth to offer convenient and beneficial care, particularly for patients with limited access. Participating osteopaths who saw their value and self-worth as healthcare providers of manual therapy, and a lack of training in telehealth platforms, were major barriers to its uptake in osteopathic practice.

1. Implications for practice

- The COVID-19 pandemic was a catalyst for osteopaths to adapt their approach for telehealth platforms.
- Telehealth use ranged from simply staying connected with patients to teaching self-treatment techniques.
- Barriers were perceptions that manual therapy was an essential part of professional identity, and lack of training in telehealth platforms.

2. Introduction

Telehealth technologies, including video and telephone-based platforms, facilitate the exchange of health information and advice between health practitioners and patients remotely [1,2]. They support patient consultations and remote patient monitoring, telerehabilitation, telepharmacy, and healthcare education and promotion [3,4]. Benefits of telehealth include translating effective healthcare delivery into improved quality of life and reduced mortality in patients suffering from chronic conditions, cardiac and respiratory illnesses, mental health conditions, spinal cord injuries, and those requiring rehabilitation following injury, illness, or surgery [5–9]. A systematic review by Snoswell et al. [10] found that telehealth could be equivalent or more clinically effective than usual care. The review included studies of 10 medical specialties, including two on telerehabilitation for chronic pain.

Telehealth took on a new level of significance with the onset of the global pandemic [9]. At the height of lockdowns and physical distancing requirements in March 2020, many Australian osteopaths chose to transition to telehealth platforms to provide continuity of care for their patients and to sustain practice income. Post-pandemic, numerous studies continue to report benefits of telehealth, including improved access to services and clinician satisfaction [11–14]. It appears that telehealth may be appropriate for some patients but not for all, including

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those with complex health conditions, those who require physical assessment and treatment [11], those who lack the necessary technological skills, and those who are resistant to change [15]. Further research is needed to investigate implementation cost and sustainability of telehealth [11], to investigate telehealth as a replacement (rather than an adjunct) for in-person care, and telehealth use in rural and remote settings [15].

Telehealth presents particular implementation challenges for musculoskeletal therapists, including osteopaths. Osteopaths stand to benefit from the capabilities of telehealth platforms for patient management, however, there are barriers for uptake related to the delivery of osteopathy services [16]. The practice of osteopathy in Australia traditionally comprises a manual therapy component combined with advice to patients about nutrition, ergonomics and rehabilitation exercise, with the ultimate aim of improving pain and function in patients suffering from injury or illness [16]. Such services, particularly the manual techniques, are typically delivered via face-to-face consultations in private practice settings. Consequently, osteopaths and their patients may expect treatment to include 'hands-on' care [17]. Moreover, telehealth is only included to a very limited extent in pre-professional teaching programs for osteopaths in Australia, leading to lack of preparedness for telehealth technologies in clinical practice [18–21].

The clinical effectiveness of telehealth for the management of musculoskeletal pain, disability, and dysfunction remains controversial. A systematic review by Cottrell et al. [22] reported that remote consultations yielded high patient satisfaction, accurate diagnosis, and clinical efficacy that was equal to and sometimes greater than that achieved with conventional face-to-face consultations. This was particularly evident for patients suffering from spinal and osteoarthritic pain who experienced comparable symptomatic improvements with over the phone telerehabilitation [23]. Other studies found that patients receiving pain coaching for chronic complaints via telehealth had higher levels of participation and comparable improvements in pain and function when compared with conventional consultations [24–26]. However, some studies lacked methodological rigour (e.g. small sample size, lack of blinding, short follow-up) [27]. Other research emphasised the importance of 'hands-on' assessment and treatment in musculoskeletal therapy and that telehealth for the management of musculoskeletal conditions can only be 'second best' [28].This was supported by a number of surveys of manual therapists reporting that the lack of physical contact was perceived as hampering 'accurate and effective diagnosis and management' [29]. Other barriers to the uptake of telehealth included legal, safety and security issues [29].

To the authors' knowledge, there are no studies on the adaptation of clinical processes for osteopathy to the telehealth delivery model. The aim of this research was to explore the use of telehealth by Australian osteopaths during the pandemic, and to identify barriers and enablers of its use.

3. Methods

3.1. Research approach

The research approach was informed by the Theoretical Domains Framework (TDF) [30], which clusters theories of behaviour and behaviour change into 14 domains and is an appropriate approach for understanding health professional behaviour. The TDF was developed to explore barriers and facilitators related to the implementation of best practice and behaviour change. It provides a theoretical lens for understanding the 'cognitive, affective, social and environmental influences on behaviour' [31]. In this study, the TDF informed the development of the interview guide so that responses could be mapped to domains and enablers and barriers identified.

3.2. Participant group

To be eligible for the study, osteopaths had to be registered in Australia and have experience using telehealth for the care of patients. Osteopaths registered in Australia but practising overseas were excluded from the study.

3.3. Recruitment

Potential interviewees were recruited using purposive sampling through the Osteopathy Research and Innovation Network (ORION), a practice-based research network based at University of Technology, Sydney [16]. The research team also notified their professional networks about the study via email, in person or via Zoom between February and November 2022. COVID-19 restrictions had been in place in clusters in Australia from early 2020 to October 2021. Australian osteopaths either transitioned to telehealth or closed their practices during periods of restriction. Those interested in more information about the study contacted the Chief Investigator. A cooling off period of a minimum of 7 days between informed consent and interview was provided.

3.4. Data collection

After enrolling in the study, participating osteopaths were emailed by a member of the research team to arrange a time for an online interview of up to 1 h. Semi-structured interview questions (Supplementary File 1) were developed using the Theoretical Domains Framework [31]. Interview questions were initially drafted from the literature and brainstormed by the Steering Committee convened in 2019 by Royal Melbourne Institute of Technology and Osteopathy Australia on the Future Direction of Osteopathy in Australia. The Steering Committee also piloted interview questions in focus groups. All researchers were practising osteopaths. Four participating osteopaths were known to the researchers through previous work or study. In such cases, interviews were conducted with a member of the team who had no relationship to the participant. Interviews were conducted via Zoom between February and November 2022 and continued until data sufficiency was deemed to have been reached [32]. Interviews were de-identified before analysis.

3.5. Data analysis

Data were analysed using the thematic analysis process described by Braun and Clarke [1]: Becoming familiar with your data by transcribing, reading and re-reading [2]; Generating initial codes or interesting features and collating data relevant to each code [3]; Searching for themes – collating codes into potential themes [4]; Reviewing themes – for completeness and relevance for the whole data set, and generating a coding map [5]; Defining and naming themes; and [6] Producing the report [33]. Interviews were transcribed using the Zoom transcription function and manually checked for accuracy against the audio recordings. All transcripts were read and re-read independently by three members of the research team (SG, RE, MF). Through deep immersion in the data and repeatedly circling back to the research questions, initial codes were identified independently by each reviewer. Codes were clustered, refined and discarded until key themes were identified. These researchers then met to present and discuss their themes and to construct the coding map (Supplementary File 2). All researchers reflected on their own attitudes towards telehealth and how those attitudes and any professional relationships they might have with participants might influence the study findings. Discussions, including these reflections, continued until meta-themes were agreed to by consensus. Finally, meta-themes were triangulated with findings from the literature in the field.

This research was approved by Southern Cross University Human Research Ethics Committee (Approval number 2020/120). The Consolidated Criteria for Reporting Qualitative Research (COREQ) [34] was

used to assure the quality of the reporting of the study findings.

4. Results

Nine osteopaths recruited via professional networks were interviewed. Of those, eight worked in group practices with other health practitioners. The majority (7/9) worked in metropolitan Melbourne, Victoria. One practitioner had fewer than 10 years practice experience, five had between 15- and 19-years' experience, and the remaining three had been in practice for over 20 years. One had previous telehealth experience using video-conferencing platforms (Table 1).

The following meta-themes were identified:

4.1. Beliefs about osteopathy and professional identity

The impact of the pandemic on osteopaths was significant, particularly for those who practised in regions where there were extended periods of lockdown restricting osteopathic practice. During these periods, osteopaths reflected on their professional identity. They saw themselves as manual therapists and the idea of osteopathy via telehealth was incongruous for most participating osteopaths. Osteopathy without manual therapy was seen as less effective and less desirable than osteopathy with manual therapy. Practising without manual therapy called their professional identity into question.

> … if we were to deliver that … our selling point in the musculoskeletal therapy market would actually reduce substantially. We would be practising more like other modalities than as osteopaths. P7

Participating osteopaths reported a similar attitude from their patients, who generally regarded telehealth consultations as 'better than nothing' but as soon as restrictions were lifted, patients returned for face-to-face consultations. P1 and P2 commented:

> I think the barriers, or most of them, are the patients' expectations. Most patients would have in their mind the idea that … they're going into an osteopathic consultation with an expectation of manual therapy and so the idea that you could do that over telehealth … seems to be laughable. P1

> Not having a great uptake [of telehealth] just really made me feel like what people value is what I do with my hands and I feel like that is actually the smallest part of what I do. So it really made me reassess and really question [being an osteopath] in terms of feeling like I have way more to offer other than just the hands-on treatment, but patients do not perceive that at all. P2

Table 1
Demographics of participating osteopaths.

Participant	Location	Years in clinical practice	Group vs solo practice	Pre-pandemic telehealth experience
P1	Metropolitan and regional	21	Group	Yes
P2	Metropolitan	15	Group	No
P3	Metropolitan	18	Group	No
P4	Metropolitan	18	Group	Limited (email and telephone)
P5	Regional	21	Solo	No
P6	Metropolitan	19	Group	No
P7	Metropolitan	15	Group	No
P8	Metropolitan	20	Group	Limited (email and telephone)
P9	Metropolitan	7	Group	No

4.2. A spectrum of use

Participating osteopaths used telehealth in different ways. One participant used telehealth purely as a communication tool to maintain contact with patients who were unable to attend the clinic (e.g. during lockdown or living in a remote location).

> It was a really good way of keeping contact with patients, not so much treatment wise because of course we're hands-on, but just to keep the lines of communication open and get a report back on where the patient was at, and for us to let them know when we would be back on track, and that we're still here. P5

Most osteopaths in the study found other uses for telehealth beyond its capacity to stay connected with patients. They conducted assessments via history taking, observation of joint range of motion and provided education to their patients (e.g. ergonomic advice, exercise demonstration and prescription, and referral). P4 adapted their examination approach:

> Examination can be difficult because we use palpatory sense in a lot of our examination … just feeling what soft tissues are like, really getting a good idea of range of motion of joints … which definitely relies on a little bit of feedback through your hands and body … but you can overcome some of those [challenges] a little bit with just observation … and tuning in … in your questioning of the patient.

P2 described their approach to treatment using telehealth:

> It's another good tool to have … it's the option of having audio and videos so that you can see the patient and discuss things and watch them do things as an osteopathic manual practitioner, and give demonstrations … if you need to, or if it's advice, management and things like that.

One clinic developed a framework to conduct full consultations via telehealth, devising innovative ways to assess patients and to demonstrate and monitor self-treatment options. They exchanged their usual clinical attire for clothes to exercise in. They set up their computer on a coffee table and demonstrated movements on a yoga mat for patients to replicate as part of their assessment, self-treatment techniques and rehabilitation exercises. The osteopaths in this clinic demonstrated the potential for hands-off osteopathic care.

> … the approach that we took in the clinic was that [telehealth] … was a practical tool to instruct patients to do what we called guided and self-treatment. The idea was that they could watch me, and I watch them, and they would copy. I would firstly watch what they were like - their range of motion, and where their body was moving and then I could walk them through specific exercises and specific hands-on techniques. We had patients using rolling pins, and thick books, and all sorts of different things around their house to work on their body. It wasn't just an exercise prescription tool. We were talking to patients about where to put their hands, and what muscles to feel, and where to press up against the wall, and all of that kind of stuff, so that it was actually a treatment that we were participating in with them, which then taught them how to use that in their home all of the time. P6

4.3. Future role of telehealth

Most participating osteopaths could see a role for telehealth in the future, albeit acknowledging their initial reluctance. Not only did they support its use during lockdowns, but they also supported its use as an adjunct or alternative when patients were unable to visit their clinic in person due to accessibility barriers. Based on their experiences with patients using telehealth, they rated health outcomes for these patients as at least equal to outcomes pre-pandemic. Participating osteopaths reported additional benefits of telehealth including high levels of patient

satisfaction, improved communication skills among practitioners and between practitioner and patient. Using telehealth promoted different ways of thinking about osteopathic care that potentially raised the perceived quality of their care.

> I think there's definitely some really valuable communication skills that you learn from it … it made me more aware of what the patient perceives is the most important thing, and actually what I want them to see as the most important thing, so it has improved my patient care … I allow time to discuss these things more thoroughly … I have tried to put more emphasis on the [self-] management side of things and explaining things really thoroughly and going into a bit more detail with pain science and things like that. I think [my care] has improved. P2

P7 went on to describe another benefit of telehealth, namely that it could empower patients through self-management advice.

> Some people who had been quite dependent on treatment were no longer able to have treatment, so they were forced to take some more responsibility for their own health care … I think there were a number of patients that did quite well in that setting.

The osteopaths in the study unanimously agreed on an ongoing role for telehealth as a screening tool for new patients, and to improve access to services for those who live in rural or remote locations, who are travelling or have severely reduced mobility.

> [Patients] shouldn't need to come in. You should be able to do that [screen, assess, give advice] from home and it's still the same time and same service, the same level of education. P2

To facilitate its future use, participating osteopaths suggested developing good resources, including a good clinical practice manual, images showing examples of common musculoskeletal strains and sprains, and short videos demonstrating rehabilitation exercises. In addition, they wanted training in the use of the technology.

> I'd want to be better at sharing my screen … faster and more competent. And I don't want to be going to Google to find an example of a lateral ankle sprain. I want to have one of the essential anatomy apps running on my computer ready to go - *look at this nerve here, or let's have a look at this* for that education [of patients]. P3

4.4. Training in the use of telehealth technologies

Most participating osteopaths had no pre-pandemic training in telehealth technologies. Those who also worked as osteopathic clinical supervisors in university student clinics received some training, and others took advantage of training modules made available during the pandemic by their professional association. Some practitioners drew on previous experience using *Physitrack* for exercise prescription. Others took the initiative to reconceptualise how osteopathy could be provided without manual therapy and had brainstorming sessions with other practitioners in their clinics. Good resources were shared with colleagues whenever they were found. Participating osteopaths unanimously recommended the inclusion of telehealth training in pre-professional entry education.

> Including [telehealth training] is worthwhile … it is a valuable skill for them … I feel like these students aren't necessarily all looking at going into private practice. There are lots of different things they might do, so telehealth is invaluable for them in terms of other [career] pathways them they might take. P2

The importance of training in privacy and other legal matters associated with using telehealth was also raised by several participating osteopaths:

> We had to develop our own consent form. I think it's probably the legal stuff that would be good to try and figure out in terms of insurances and privacy and consent - how that all sits with the requirements for practice … I don't know that we did it as well as we could because you're looking into people's homes, and that's always an issue of privacy isn't it? P6

5. Discussion

While there has been a spike in interest and use of telehealth services in several healthcare-related fields over the past decade, the necessities of physical distancing and mandates to prevent unnecessary exposures for healthcare workers and patients since the beginning of the COVID-19 pandemic have considerably transformed healthcare delivery [35]. There is currently no literature describing the use of telehealth in the Australian osteopathy profession and limited literature in professions which commonly use manual therapy more broadly [29]. This research contributes to the literature by describing the barriers and enablers of the use of telehealth by Australian osteopaths.

Participating osteopaths reported initially using telehealth as an opportunity to remain connected to their patients by seeking updates about their musculoskeletal health and well-being. After realising the potential to provide additional care, most went on to offer consultations using teleconference technologies to provide clinical care across a range of musculoskeletal healthcare needs. Notably, osteopaths who had additional clinical skills beyond hands-on manual therapy saw opportunities to promote these skills and create or expand their skillset via telehealth. Indeed, many manual therapists have expanded their treatment techniques to include exercise and pain education in line with clinical guidelines (e.g. for low back pain) [36,37]. However, in this study, some practitioners also embarked on innovative consultation techniques to suit the telehealth platforms, and value add to their traditional offerings of osteopathy services.

While the pandemic forced healthcare workers to adopt telehealth predominantly for safety reasons, not all participating osteopaths were satisfied with telehealth options. For example, one participant suggested the concept of providing telehealth consultations beyond lockdown mandates as 'laughable'. This comment demonstrates a lack of acceptance and a major barrier to participating osteopaths' willingness to take-up telehealth in practice. Other reports from early phases of the pandemic also identify care providers' unwillingness to participate as a barrier to telehealth implementation [38]. A lack of specific training for telehealth may have contributed to this failure in acceptance and uptake [39] and this is also reflected in this study as only one participating osteopath had used telehealth before the pandemic. When lockdown restrictions were enforced, practitioners took advantage of the brief training made available by universities and professional associations. However, despite its potential benefits, the widespread adoption of telehealth among osteopaths has primarily been challenged by a lack of pre-professional training, and the perception that manual therapy is fundamental to osteopathic intervention. Similar findings have also been reported for other manual therapies, including chiropractic [40] and physiotherapy [29].

As for the concept that the professional identity of osteopaths is inherently linked to the use of manual therapy, a scoping review by Phillips et al. [41] concluded that 'touch (w)as central for osteopathic interaction' and identified it as the most prioritised attribute of osteopathic professional identity. This was followed closely by 'non-verbal communication'. As such, some osteopaths may have struggled to adopt telehealth from a professional identity and sociological standpoint as clearly telehealth does not afford osteopaths opportunities to use these skills. For these osteopaths, changing their approach to patient care by adapting to telehealth platforms would jeopardise how they fulfil their role and adhere to professional standards, while simultaneously challenging societal expectations of osteopathic care and their own

professional identity.

There are, however, aspects of osteopathic care that lend themselves to online delivery such as physical activity coaching, exercise rehabilitation, pain education, and guided self-treatment [9]. Finding value and self-worth in providing such hands-off services may be the key to transitioning osteopathy to online service delivery. It was evident in the present study that telehealth helped participating osteopaths learn to listen to their patients and changed the way they clinically reasoned in the absence of face-to-face interactions and the knowledge gained from physical touch. It was also acknowledged that some osteopaths needed to develop additional skills beyond manual therapies which currently may be undervalued and under-developed. Other osteopaths, for example P7 in our study, already understood and emphasised an expanded concept of osteopathic care: 'I feel like I have way more to offer other than just the hands-on treatment'. Adding telehealth to the range of treatment options offered by osteopaths can only extend the reach of their services. As Saragiotto et al. [36] suggest, osteopaths should consider adding telehealth to their toolbox 'where it makes sense and where there is evidence that it is beneficial for people who seek their care' (p. 4).

A key enabler of telehealth in the profession was the disruption of normal services brought on by the COVID-19 pandemic. Participating osteopaths learned how to use and implement telehealth technologies because for many, there was no other way of continuing to practise. This study reveals that telehealth represents a paradigm shift for Australian osteopaths and their patients, with osteopaths' responses suggesting there may be a market for telehealth and coaching/treating online facilitated by osteopaths. This is evident from the approach of P6 in our study, where the original intent to simply follow-up with patients translated to fully-fledged telehealth consultations. Although some participating osteopaths did not think there was a market for telehealth, none of the osteopaths who started offering telehealth found insufficient uptake of the services or patients unwilling to pay for it. This indicates the willingness of patients to interact with osteopaths in consultations without manual therapy. Similar results have been found in medical studies investigating care offered via telehealth consultations for appropriate clinical conditions [42]. Other studies also reported clinical outcomes following telehealth visits may be comparable to those of traditional in-person consultations, with the additional benefit of superior access to care [10,22,43,44]. In addition, telehealth may encourage patients to take a greater role in managing their own health [45]. Future studies could explore patients' experiences of osteopathy delivered via telehealth.

Another enabler of telehealth identified in this study was the potential to make osteopathic care more widely available. While some osteopaths remain unsure about the value of telehealth, it presents an exciting opportunity for the profession in Australia. Telehealth can be readily integrated to make osteopathic services more available to those in rural and remote communities, which could help to combat the current maldistribution of osteopaths in Australia. While highly unlikely to be the dominant type of consultation offered, telehealth could meet the needs of specific types of patients. It also has the potential to serve as a triage system and screening tool prior to face-to-face consultations, thereby minimising the travel burden on patients residing in rural and remote communities. Osteopaths could explore integrating telehealth services to diversify and expand their scope of practice, provide access to osteopathy health services beyond metropolitan locations, and promote self-management and empowerment of patients.

5.1. Limitations

Purposive sampling was used to recruit osteopaths with experience using telehealth. It is possible that selection bias could have influenced the findings of this study. However, only one of the participating osteopaths had previous experience using video-conferencing platforms for consultations and all used telehealth as a replacement for face-to-face consultations during the COVICD-19 restrictions. Our cohort were relatively experienced osteopaths (7–21 years in clinical practice) and it is possible that less experienced osteopaths may have had different views. It is also possible that social desirability bias influenced the outcomes, particularly as recruitment was via professional networks. To minimise the risk of bias, participating osteopaths were interviewed by members of the team with whom they had no professional relationship. Moreover, the themes identified from this study present a range of experiences with telehealth that are consistent with literature from other health professions. As with all qualitative research, the findings are context-dependent and not intended to be generalised [46]. However, the enablers and barriers identified in this study may have relevance for other health practitioners in similar contexts.

6. Conclusions

The COVID-19 pandemic was a major enabler of telehealth services by participating osteopaths who were forced to take up telehealth during periods of lockdown. Participating osteopaths became increasingly aware of its potential benefits, particularly as a screening tool, and for patients with limited access to in-person care. Despite its potential benefits, the widespread adoption of telehealth among participating osteopaths was challenged primarily by a lack of pre-professional training, and the perception that osteopathy is primarily a manual therapy.

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Ethical approval

Ethical approval for this study was provided by Southern Cross University Human Research Ethics Committee (Approval number: 2020/120).

CRediT authorship contribution statement

Sandra Grace: contributed to the conception and design of the study, All authors were involved in data collection, conducted the data analysis and interpretation, wrote the first draft of the manuscript, All authors edited and approved the final version of the manuscript. **Roger Engel:** contributed to the conception and design of the study, All authors were involved in data collection, conducted the data analysis and interpretation, wrote the first draft of the manuscript, All authors edited and approved the final version of the manuscript. **Chanelle Mastronardo:** contributed to the conception and design of the study, All authors were involved in data collection, wrote the first draft of the manuscript, All authors edited and approved the final version of the manuscript. **Lee Muddle:** contributed to the conception and design of the study, All authors were involved in data collection, wrote the first draft of the manuscript, All authors edited and approved the final version of the manuscript. **Michael Fleischmann:** contributed to the conception and design of the study, All authors were involved in data collection, conducted the data analysis and interpretation. **Brett Vaughan:** contributed to the conception and design of the study, All authors were involved in data collection. **Azharuddin Fazalbhoy:** contributed to the conception and design of the study, All authors were involved in data collection, wrote the first draft of the manuscript. All authors edited and approved the final version of the manuscript.

Declaration of competing interest

Authors declare none.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ijosm.2023.100696.

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